

D.L.  
Stadel  
1964

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## Journal

### 3 November Tuesday

We worked on microclimate materials and in the afternoon we tried to go over to Johnston to oil the gun which is stored at the Security police headquarters. The gun was very rusty and had pits in the barrel. While over there we talked with Major Sudsa about the bird core we were hitting on the island and went to talk with Paul De Weese about the rats on the island. The exterminator for the island is going to try to collect a specimen for us and keep us informed on the rat situation. There are two species of rats on the island according to the exterminator. We went out to band birds and there were very few on the island which makes it hard to band. The Wedgetailed Shearwaters are thinning out and there are few left.

### 4 November Wednesday

Doc and I went around the island after checking the mice to check for strange birds. We saw two RWTB land on the hill by the Frigate nesting colony. They went into a large burrow and were under ground, the burrow was about three feet deep and 1 and 1/2 wide. We conducted the growth and development on the Common Noddies and

### 5 November Thursday

We went around the island and checked the mice as usual and found nothing.

We went over to Johnston on the 1100 M-boat to pick up two rats at the Camp office. ~~and then went over to the dispensary~~ We ate dinner over there and come back on the 1330 M-boat.

We saw 5 Fairy terns on Johnston while by the dispensary.

Worked on Paper work all the rest of the day.

We banded Wedgetailed Shearwaters and only banded for one hour before we had chased all then off the island. I banded 7 chicks and Doc and two Dark Phase birds. We only found 48 birds to band.

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## Journal

6 November Friday

We checked the mice and walked around the island as usual. We saw three RFB fly over the island. I can't remember what else we did.

7 November Saturday

Today we conducted the activity study on the Frigate Bird and Red-footed Booby. While I conducted the study I spent the time in between counts at the signal building reading the book "Basic Problems and Techniques in Rangg Research" trying to get some better idea how to map and study the plants on the island. I picked up several ideas and Doc also has ideas that he got from Beta's friends he had written. I am going to try to determine how much moisture the soil can hold on the island.

In the evening we banded 4 Wedge-tailed Shearwater chicks and two Common Tropic chicks. The VT were study chicks which were on the island.

We set the mouse traps all day and checked them every two hours to see what the activity period is. We did not bait the mouse traps. We intended on running the traps all night but over slept one period so we will have to run them another night.

We forgot to set the mouse traps last night.

8 November Sunday

I took advantage of the facilities on the station for recreation and did as little as possible, read and swam and played volleyball and watched the movie. I started working on Deutsch. T

The dogs killed a young Wedge-tailed Shearwater.

We ran the mouse traps all day ever two hours and then ran them all night, god what a miserable night. We would get one hours sleep between running the traps each time. One thing became evident after running the traps all night (it is one hell of a way to make a living). The mice are active early in the evening and at each successive two hour period they were less active. The number caught each hour was less, not baiting the traps may have had a part to play in the decreasing number caught, but we caught new ones all night.

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Journal

9 November Monday

Doc and ran the traps for the last time at 0700 and then I tried to recuperate and slept most of the morning. I worked on catching my journal up and banding forms all afternoon.

We banded 31 Wedge-tailed Shearwaters and cleaned and baited the traps. Most were not in working order. We banded 10 chicks and one Dark-phase bird. The chicks are coming out of the burrows and sitting. Several of the chicks are free of down and will be flying within a week (I think, perhaps two weeks). Several of the chicks which I picked up have started to loose weight.

10 November Tuesday

Doc and I ran the traps as usual and walked around the island to check for accidentals. We saw one immature Frig to drain on the island and another one floating in the lagoon.

Happy (the dam dog) is killing Wedge-tailed Shearwater chicks at a fast pace, he killed three chicks in the last 24 hours and one was a Dark-phase bird. It makes us sad but there is nothing we can do, he is going out by himself and the Coast Guard can't try to stop it. They are not encouraging it now like they were when I first got here (because of better interpersonal relations).

We got all kinds of god mail and a notice that I had made Q3 7. I worked on records and orders and letters all day and night. Doc is running the mouse traps all day and we are going to run the traps all night.

We ran the traps all night every two hours and had a miserable night. I stayed up until 0400 and Doc tried to sleep. I finally gave up and went to bed. The mouse catch gradually decreased from 3300 until morning, we baited the traps and check them all each time for correct operation.

I think I heard a Grey-backed tern twice, but am not sure since it has been so long since I heard the call.

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## Journal

### 11 November Wednesday

We slept until noon after last night. Lee and I weighed and measured the one remaining Common Noddy chick.

We check the possibility of placing orange streamers on the wing for better identification from a distance. Three to place the streamer on the inside of the Scapulars and this seemed to restrict the flight, because of the space left in the wing where the scapulars normally covered, the streamer held the scapulars next to the wing and would not then go into place. The last bird we placed the streamer on the outside of the Scapulars and this did not affect the flight in any sense. The correct length of streamer seemed to be about 6 inches after the jamb was pulled up. You could see this type of streamer about 1/2 mile away as far as the eye could see. Long after you could not identify the bird you could see the orange streamer high above the island.

I counted the 114 Red-tailed Shearwaters on the island last night. There were only 210 birds in all, and we were.

### 12 November Thursday

We intended on doing the North Island census in the morning but could not because of a change in M-boat schedule. They tried to tell us that it would take 8 hours just to go over to North island. This sort of made no end, as a matter of fact it pissed me off. I went over to talk with Carl Heidinger who is in the Navy NC and a friend who I had met playing Bridge. He arranged it so we just have to call him and he will set up a schedule for our convenience.

There were 15 Ruddy Turnstones and 10 Polynesian Plover and one Handring Tattler.

We checked the mouse trap and walked around the island to look for strings etc.

Most of the day was spent fighting the M-boat schedule, which we rescheduled.

Carl Heidinger told us that he had seen 10 to 12 mud-hens at a brackish water pond at the end of the runway, I don't know the species.

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## Journal

### 13 November Thursday

Doc and I went over to Johnston on the 1700  
pm boat to conduct the census. The CO could not  
find us one of his new logbooks and the old one which  
I was riding broke down so Doc ended up doing the  
entire census, and I sat around looking at the  
beautiful scenery. We stayed over and conducted  
business all afternoon and then stayed for the movie.  
TF T-1000 went to weather data writing.

National Weather Records Center  
U. S. Weather Bureau  
Federal Building  
Asheville, North Carolina 28801  
There is a book on the tide fluctuations  
Central and Western Pacific Ocean  
and Indian Ocean

### 14 November Friday

I was up until 0200 building a relationship with  
the crew and did not want to get up to conduct the  
activity study but somehow I managed to sleep out  
early and slept between counting, birds?

I'm sure the light intensity determines how  
active the Great Frigatebirds are. Today was a bright  
sunny day and there were seldom any birds on the island,  
on some days there is a cloud overcast and the birds  
may sit on the island all day without going out to  
sea.

The Red-footed Boobies are starting to sit with the  
Frigates and on the islet and I feel they are  
starting to show courtship behavior. I found one  
sitting in the Frigate colony the other night.

Doc was sick as a puppy, seems like he has too  
much interpersonal relationship with the crew. He  
was incapacitated all day.

There was a RTTB under a pescherry tree by the  
barracks. The RTTB flew over the island.

Twice now I have seen fish jump out of the water  
trying to catch a Sander Plover when it flies close  
to the water. One problem the fish were only 2 inches  
long, the whole school jumped to catch the Plover.

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## Journal

### 15 November Sunday

A day of relaxation and sleep. Doc and I checked the mice and then checked the island. After supper we examined the bird on the island and then watched the movie.

We found one Frigate sitting on a nest with one egg, the egg could have been there almost two weeks since we have been trying to avoid disturbing the nests.

We set out 27 traps to catch mice to autopsy.

### 16 November Monday

We autopsied mice all day, twenty-one done. Doc skins and I autopsy.

### 17 Nov Tuesday

We checked the mice and then autopsied mice in the afternoon and in the morning we wrote the report. Several things are interesting evident to Frigates:

1. The mice are not breeding at the present time,
2. One of the females are pregnant but several have embryo sacs.
3. The males are mostly not female, most of the mice examined are immature.
4. The majority of the mice were immature and have never bred.
5. There are three types of parasites, one small white one and an orange one.
6. The mice autopsied were not fat and only a small number had fat at all.
7. Mice with a molt pattern are being saved as flat skins.
8. I can't tell if the mice in the 10 gram range are are immature or if they have ever breed.
9. I can see what I think are embryo sacs but whether they are all from the last litter I can't tell. One female had 11 sacs on the one side, which seems a little high for one litter.

Counted all details.

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## Journal

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November

~~Thursday~~ Wednesday

We ran the mice traps, and checked the island. We autopsied mice all day and completed the job, we have over 50 done.

Doc and I have been putting orange streamers on wedge-tailed Shearwaters each morn & and none have been seen since. We are trying to use bigger streamers so they can be seen from a greater distance. We have been using two methods. One method is to use a tag only bigger then the leg streamer, it can be seen after you can't identify the bird. The other method I don't like the way of being cruel to birds. We cut a hole in the membrane and attach a cattle tag through the membrane and attach an orange streamer onto the tag. There are two faults, one the cut will be continually ~~be~~ irritated by the streamer flapping in the wind, second the cut usually hits a blood vessel. Of the 12 birds cut through the membrane only 2 succeeded in flying away the rest lit in the water, they would keep floping their wing trying to get rid of the irritation. Beside the fact it irritated the birds it is very cruel and I will be damned if I will do it any more, I don't killing a bird or attaching bands, but to place a streamer on a bird and have it be continually in pain is beyond my abilities to do.

We were out looking at the wedge-tailed Shearwaters and all of a sudden I realized that there were Grey-backed Terns calling. I thought I had heard them before, but was not sure. We counted 19 on the old dock.

There is at least one chick on the island which is almost flying and the wedge-tailed Shearwaters will <sup>be</sup> scarce on the island in two weeks.

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November Thursday

Doc and skinned out the two ducks and I skinned the Sharp-tailed Sandpiper so Caringi (A OG man) could take them back to Henolau to Dr Ely. The ducks were also autopsied and the stomach and tongues were saved. We worked on reports in the afternoon and played games.

There 3 Great Frigates with eggs.

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## Journal

### 20 November Friday

Today I conducted the activity study and made a between times. Doc went to Johnston to pick up more rats. We ran the metal grid. Native on an overcast day. The Frigates stayed on the wires most of the morning.

Today showed what I feel is the factor controlling the activity of the birds. The early morning was dark and cloudy, the Frigates stayed on the wires until the sun came out and then the birds went off to feed. You could see the difference in the number of birds on the wires after the sun came out.

### 21 November Saturday

Today Dan and I went to Johnston Island to conduct the survey for the special report which Fly wants for our report. The Wedgetailed Shearwater chicks and the RTTB chick were gone. We saw one Golden Plover on the beach which had an orange streamer. We could not get boat connections to North Island so we omitted it on this survey.

I counted the adult Wedgetailed Shearwaters and obtained a number of 16. I cannot believe how fast the adults are leaving, the chicks are being favored so they will fledge enough weight to fly.

### 22 November Sunday

We worked on the special Report, most of the day and discussed the Sooty bird.

The day from the Pacific to Black Rock was very dull all day for preparation and a cook out, every operation finished by 1:00. I talked with the Captain of the ship and Mr. Dick Johnson.

Doc and I went out to check for Wedgetail film with orange streamers on their wings but found none.

I observed a Wedgetailed Shearwater chick feeding tonight and they feed different than the Albatross. In the Albatrosses the chick turns its mouth wide side so does the adult. In the Wedgetail the adult opens

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## Journal

22 Nov [Cont]

1. The chick sticks its bill into the adult's mouth. Step by step it is:

1. The chick will sit in front of the adult's mouth. It is a high pitch I found. The chick is excited fast.
2. The chick opens the adult's head and over pulling, pecking and using a real musicians. The chick is pecking away until the adult opens its mouth, all the time the chick's beak is in the mouth.
3. Then the adult opens its mouth the chick stick its bill down in the mouth of the adult and it will pull out the partly digested fish material. The food is highly composed of fish pieces. The the chick is younger the reg. part of food is really soft, as the adult gradually over the life of the chick the food be over a higher content of partly digested fish materials.
4. The chick may feed many times and always feeds more than once. The chick will always wait for the response of the adult to open its mouth and feed the chick swallowing the food and then waiting again.
5. The chick always stays in a submissive posture by sitting low to the ground and holding its neck and head lower than the adult's head. This submissive posture is common in all the sea birds I have seen feed so far.
6. The chicks can be heard cheeping at night even when there is no adult present. It may play a part in drawing the adult to the nest. In the early summer, August when the chicks are about a month old this cheeping can be heard by it seems like all the chicks in the area. The adults do not feed the chicks every night, so I don't know if the chicks are ever right or only when they are hungry or at a definite interval. The adult in an area may elicit the response of the chicks cheeping. The *if* chick may be able to call the adult or it may hear the adult calling in the air or on the ground. I have only heard an adult single tail call once while it was in the air.

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## Journal

### 23 November Monday

I typed all morning on the Special Report for Fly. I wrote the species account for the report and typed it up.

After dinner Doc and I went up to the other end to rearrange the mouse grid, it now contains 72 traps in a grid 928 and the traps are 20' apart, with a 50 foot strip where the road is.

The wind was out of the south instead of the usual  $100\%$  east and the Great Frigatebirds were sitting facing the wind and were sitting on different wires than usual, the Birds sit on wires so they always face the wind, they roosted in the same fashion.

The number of Sooty Terns flying over the island at night continues to increase and you can hear a difference each night. Tonight there was a big enough increase in number that I could tell the difference from last night. There just hav been over 300 birds within ear hearing distance at one time. The Sooty Terns are never heard of during the day, except for an occasional one or two.

The Wedge-tailed Shearwater chicks are out at night in force and I could see a difference from last night, very few can be heard giving the high pitched cheeping feeding  $\#$  call. Most don't have down on the head and neck region, but the birds which do have down have it on the neck and head. I saw tonight chicks which I have ever seen before. We are going to go out and band chicks  $100\%$  Wednesday night.

I did not find any adults with orange wing streamer tonight and perhaps I will not find any.

### 24 November Tuesday

Doc and ran the us traps and trapped 50 mice, but many of the traps were not in working order so it was not a good representation of what will be the trend of this grid. We toe clipped 22 new mice  $100\%$  today. There were a tremendous number of traps which had been sprung but there were no mice in them.

While running the mouse grid we saw a Hawaiian Short-eared owl. It circled the island several times before disappearing behind the island. The bird came out of a barrow 15 feet from the grid.

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24 November Tuesday [Cont]

Sam and I worked on the mag. falcon surveys of the island in the afternoon and in the morning. I found 11 adult Pigeons this morning and 10 adults this night and one of the adults.

25 November Wednesday

Today was one of those days on Sand Island which makes one appreciate the outside world. You get off this S. O. B. (as I call it) hole.

To start the story out right one must know that a week ago I went to the police office to apply for a government drivers license. They told me to bring the application back to the office from 0800 to 0930 and take my drivers test. This morning Doc and I got up early to catch the 11:30 boat. When we got there all we had to do was sign a day of release and they told us to come back tomorrow for the license. Why would I have to wait a day? I asked myself that I applied for the license? I guess I don't understand the importance of the days wait when it could have been done in one day, instead of playing around for three days. So top of the morning I had to sit on the island until 11:30 for the drivers test.

While on Johnston I saw two Sooty Terns and one Golden Plover with an orange stomach.

We had another look out.

I estimated that there were over 1000 Sooty Terns flying over the island tonight. I don't know why the great flocks seen last night but you can easily see the difference. It reminds me of banding on Kur in the central pac.

We checked and there were no Puffins or Petrels on the island tonight that we could find.

There was 12 Frigate Birds on the island tonight. I don't know if they actually left the island or if we just didn't find them.

The natives were restless tonight.

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## Journal

### 26 November Thursday

Today was Thanksgiving and it was pleasant. At least the Coast Guard tried to make it pleasant for the men home and I think they succeeded to a certain extent. They had all kinds of mixed drinks, being a beer as I did not indulge in the graft but only because I can't stand hard liquor. The meal was unbelievable, they had enough set for a tribe of Indians. We took the day easy and tried to forget the fact that we were not home.

While we were playing ballfield I noticed a flock of Great Frigatebirds over head and all of the birds in Grindal Point was at a mile apart in the entire thermal. Apparently all the males were sitting on the ground displaying for the females.

The sooty Terns were starting to return around the island at 1800. There were about a 1000 flying over the island at night, I do not know how you calculate, but there were many birds and 100 seems like a good round number to state.

Doc Kirkpatrick and I conducted the plant survey for an hour after chow and it helped us to relax.

I saw an adult Frigate take off the water, I did not see the bird hit the water so I don't know how long it was in the water.

I saw a 1.8 "Wedgetailed Shearwater which we had placed an metal tag and streamer on

Doc and I banded 600+ Sooty Tailed Shearwater chick.

### 27 November Friday

Doc and I checked the mouse traps and I saw an immature Frigate.

I think I saw a Red footed Booby defending its nest site, there is no nest but I felt that there will be soon or it was defending its roost site on the ground.

There appeared to be more Brown Boobies on the island this morning.

We banded a RFB bird morning.

The common Tropic Birds were feeding just off the island this evening at dusk. They were feeding in shallow water about 100ft to 100 yards of the island.

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Journal

27 November Cont'd

I ran the antifly study all day and conducted the plant density survey. It was rather a cloudy day and the counts were exceptionally high all day long. The vegetation study will be applicable to all the studies conducted on the island.

I can see a difference in the number of Sooty Terns on the island over last night. They are increasing at a fast steady rate.

28 November Saturday

We ran the mouse traps and looked over the island. I completed all the paper work that I had to do for the island before I left.

Doc and I went to Johnston Island to conduct the bird census. We went to talk to Wayne Bellis about a vehicle to conduct the survey, he is resident manager for Holter and Harvey. He could cover more of the island in less time with the truck. We stopped at points along the beach to check for birds.

The Golden Plovers did not seem to have territories set up. We saw two large groups one of the groups had 40 birds and none showed any territory defense. There were scattered birds which had territories but as a whole they were in large groups. We counted 93 Golden Plovers.

We counted 4 Ruddy Turnstones.

We counted 2 Sanderlings.

We saw 3 Sooty Terns with clear claims.

When we went out to set the traps and count birds for the survey we counted 37 Gray-backed Terns, and 20 Hawaiian Noddies.

There was a very large flock of Sooty Terns off the east shore. They seemed to be hovering in the air place. I don't know for sure how many there were but there was a tremendous number, it sounded like the time on Kure when there were 6000 birds over my head. I don't know for sure how many there were but am going to estimate there were over 5000 birds. How can you tell for sure, I do know there was a very large flock,

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## Journal

29 November Sunday

Doc Kipperstahl & I checked the mouse traps  
and conducted the bird census for the report.

One of the counts from the Stockdale team: Three Great  
Frigate-birds, an adult ♂ & ♀ and one immature ♂.

30 November Monday

Caught the plane at 2200  
and arrived at the hotel at 0300  
met Lehner & moved in with  
him.

1 December Tuesday

Bob Standon Phil Lehner  
& I went to Pearl City  
and Pearl Harbor & ~~then~~  
moved equipment from  
the Shearwater. We decided  
to go to Hawaii so we  
left Honolulu at ~~0~~ 2000.

2 December Wednesday

We went around both  
roads looking at scenery and  
looking for birds. I took  
all kinds of pictures. What a  
riot we had. It cost about  
\$40 and was worth it. A bus  
driver backed into us and  
at night our lights would  
not work so we had to  
call a tow.

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## Journal

2 Dec [cont]

One of the funniest days of my life. Lehner took a picture of Standorn taking a picture of a horses ass.

We got back to Honolulu about 2230 and Wally & Kepler had arrived so we talked most of the night.

Clapp & Glomen King left on the Cromwell yesterday.

3 December Thursday

Wally Lehner & I took care of running around. The ATF arrived the following people say here now; Fred Sibley, Doug Hackman, Paul Woodward, Bob Standorn, Phil Lehner, Bill Westz, Doyle Husted, Dick Merrill, Cameron Kepler, Allen Anderson, Doug Whitman. The first 7 of us went out to supper & 6 of us went out on the town.

What a night one of the wildest ever had. Lehner put on a show.

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## Journal

4 Dec Friday

Slept all morning and ran errands all afternoon. Went to the football game & other places. Bought a supply of books.

5 Dec Saturday

Slept all morning and Bill Wixty & I went to Bishop Museum to make out the keys on all oceanic birds in the collection.

6 Dec Sunday

Max Tomson and I went to the Zoo in Honolulu and I took tele-photo pictures of all the animals except for a few when I ran out of film.

7 Dec Monday

Wirtz Kepler and Husted and I ran around town all day and bought supplies for Sand and Kure. I had a big long talk with Ely about the project. He seemed to be worried about the look in my eye and thinks I will come off Kure before the end of three months.

8 Dec Tuesday

I left for Kure on the 1000 Northwest flight and arrived on Midway at 1430 and met Don Ownby and <sup>^</sup> Ludwig and Ballard. Spent the evening reading

9 Dec Wednesday

Went to eastern Island with Dr Harvey Fisher and Jim Priest and Ed Mesith who are working on the Albatrosses.

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Joanna

10 Dec Thursday 1964

I arrived back on the island paradise today and am glad to be back, I feel bet'er alraady. The conditions for working are so much better and more pleasant surroundin's and when I step out side to spit it does not land in the ocean like on Johnston. I think I developed all kinds bf phobia on that hole.

Fleet showed me the island in a sort of fast fashion and I could not remember every thing he said.

11 Dec Friday 1964.

Bob Fleet and I went out and picked up Black-footed Albatrosses which were on nests and recorded band recoveries of nesting birds. We spent the entire afternoon and evening. Friday morning Bob showed me around the island, we checked the Laysan and Black-footed Albatross nests which they are recording nest attendance of birds and nest change over.

We went out and banded Boobin Island Petrels on a study area where Bob is going out every night and recording the number of birds present and the number banded, he is keeping track of the weather conditions to try to determine why there are more birds on the ground on different nights. I will take over the study when Bob leaves.

12 Dec Saturday

We conducted the Shorebird seal census and counted all the Laysan Albatrosses which were on nests. It took me 5 solid hours of walking to cover the beach and all the cuts in the Scaevola connected to the beach. Some of the Blackfeots which we handled yesterday have deserted

We banded Redfooted Boobies in the central Roost. We banded 17 RFB and one Frigate and collected 6 recoveries. All the birdw we painted go green so we could tell individual birds from the two respective roosts (north and Central).

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# Journal

## 13 December Sunday

We conducted the activity study all day and it was the usual very boring thing which Bob and I both hate. It was cold and miserable and rained on Bob. There were Brown Boobies feeding around the island all day mostly close to shore. We recorded what individual birds were doing and what patterns they follow while leaving the island or coming to the island after feeding. There seems to be a set pattern in leaving the island and returning of the RFB. There are patterns in all the species.

Bob set the traps for the Area AL rat grid.

## 14 December Monday

Bob Fleet and Dave Worth and I did the rat trapping and finished at 1130 intime for chow. Several rats were killed and some of them were eaten. I worked on Wedge-tailed Shearwater data in the afternoon and checked the Laysan Albatross.

## 15 Dec Tuesday

We ran the rat traps with the help of Dave Worth until 1000 and then he had to go to work, Bob and I completed the work by 1200. Checked the nest attendance of the Laysan Albatross, and worked on paper work.

## 16 Dec Wednesday

Ran the rat traps and completed the task with 149 rats in 144 traps. We had a trap with two rats in it one was eating the other while it was still alive, the one rat had its hind leg eaten and its guts were hanging out and it was still alive. Made me sick and shiver.

## 17 Dec Thursday

Did the rat trapping and it rained and the wind blew at 40 knots. One of the most miserable days of my working career on the project. We finished an 1500. The plane could not land but dropped mail. It is too cold to work in lab or work on the mess deck on paper work so I just went to bed. There is no heating on the island except for small electric heater.

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## Journal

18 December Friday

It rained all morning and we stayed in instead of playing the valent Biologist (Fleet and I both melt). In the afternoon we went out and staked 25 Albatross nests to be used as a control. The nests will be checked once a week to check nesting success of this species if there is no disturbance. I will stake 25 more nests when I get a sunny day and will not get wet. It rained all evening and night.

19 December Saturday

It rained almost all day but we conducted the shorebird, seal, and albatross census. I finished up on transcribing the Wedge-tailed Shearwater data on to the individual sheets.

I saw a thermal with 15 Brown Boobies in the air at once and this is the first time that I have ever seen this, the wind was blowing very hard (30 knots). I have seen this several times since coming here this winter.

Since there was no plane last Thursday and we had no movies we played Scrabble with two people as partners.

20 December Sunday

Tried to conduct the Activity study but the wind was blowing at 40 Knots and it was too miserable and I had to hang onto the tower and could not get anything done so I quit.

The most terrible storm hit the island today, they say winds up to 65 knots, and the waves were something else.

21 December Monday

Rain all day and the wind so we stayed in only going out to check the Albatross nest.

We walked around north point to survey the damage done by the storm and then on the way we recovered the picked up birds on nests (Blackfooted Albatross)

I picked up a Leach's or Cook's Petrel on the beach. Its rump is white. The bird was dead & in bad shape.

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## Journal

22 Dec Tuesday

It rained all day and the wind blew at about 40 knots. We hibernated in the station headquarters all day. It was so cold that we ~~had~~ had to work in the station headquarters by the heater. For the last week the lab has been too cold to work in so we have a desk in the living quarters. I worked on Wedgetail data all day and checked the Albatross nests.

23 Dec Wednesday

Today was a good day for work and planes, 4 planes came in today with supplies and mail. The wind was only about 15 knots and I only got rained on all day once which is a record for this tour on the Island paradise Kure.

I staked 25 Laysan Albatross nests for a control, the nests will be disturbed as little as possible and the nesting success will be recorded and this should give success of the eggs and nesting success.

I looked for shells and checked the beached for tagged seals, I was successful in both, I have about 200 shells which were washed up on the beach over the last week storm.

Cameron and I collected 25 rats for Bill to autopsy for his monthly sample.

I am feeding the RTTB chicks and keeping notes on them for Bob Fleet. Fleet left the island today and Cameron Kepler arrived. I enjoy working with both of them. I am going to band Bonin Island Petrels.

Cam and I banded Red-footed Boobies.

24 December Thursday

We conducted the activity study all day in the rain, it was just a light rain so it was not too bad, cold on the feet which was the only part of us that got cold. We checked the Albatross nests.

D.L.  
Stadel  
1964

P 2/1

## Journal

24 Dec Cont]

Today was very exciting on the island. Cam saw two Black-footed Albatrosses on the island, one an immiture and the other an adult, there are at least 5 Glaucous winged Gulls on the island and either a Western or a Herring Gull. I collected the immature Glaucous winged gull but could not get near anything else.

It being Christmas eve we tried to better the relations with the crew by going to their party. An enjoyable time was had by all.

25 Dec Friday

We checked the Albatross nests and took the day off

26 Dec Saturday

We conducted the Shore-bird count seal census and counted the Albatross nests. I checked the beach and counted 78 seals on the beach. I saw

I saw 20 Brown Boobies on the beach sitting in a big group. I have seen this before

I saw a Sanderling on the beach with only one leg. The right leg remains and the left was gone.

I counted 78 seals on the beach and many of them were tagged.

27 Dec Sunday

In the morning I walked around north point to take pictures and get seal numbers. After dinner Cam and I went out to get blood samples, take measurements, weight, and parasites off Layian Albatrosses. We spent most of the afternoon trying to get organized and getting out of the rain. After supper I walked around south point to check the albatross nests and check for seals on the beach.

We collected an Albatross which had a terrible looking growth on its back. It looked like it had been bitten by a dog and the backbone was showing and all infected. The bird was limping and near dead.

We walked around south point after the movie and caught a Glaucous Winged Gull which was weak and banded it and made out Mc Bee cards and took pictures.

D. S.  
Stadel  
1964

# Journal

## 28 December Monday

Checked Albatross nests in the morning and checked the beach for seals.

Cam and I cleaned the lab and worked on paper work for several hours. We staked the North Antenna Field into a grid where Ca. is working on looky behavior. I collected Berlese samples.

In the morning I checked the south beach for seals and after supper I checked the north beach for seals and got a good picture of an Immature Black-legged Kittiwake. I walked ~~up~~ within 15 feet of the bird to get the telephoto picture.

I checked the South Point for Gulls after the movie and then banded Bonin Island Petrels in the study area.

During the day there were up to 6 Ruddy Turnstones eating the rat poison outside the Skippers ~~gas~~ quarters and I imagine that they will die, unless they stop feeding the rats since there are less rats to be seen around the station.

There are dead rats laying all over the island, in every clearing over the island you can see the, half eaten if they have been there very long.

After the movie I walked around North Point to check for seals and Gulls. There were no seals on the north point like in the day time. I did not see any Gulls.

I saw 14 Cormorin Noddies on the North east beach while walking around at night.

## 29 December Tuesday

I went around north point in the morning at 0800 to check for seals and there were none on the beach. The sand island reappeared so they sleep out there not instead off on north point and on Green Island. I was also looking for the Black-legged Kittiwake so I could collect it. I also rode the scooter around South Point looking for the gulls and Kittiwake.

We collected Blood samples, parasited, did weight and measurements on Laysan Albatrosses.

I checked the north and south beach for the gulls after dark but did not see them. Banded Bonins. Worked on Paper work at night and read.

D.L.  
Stadel  
1964

P 213

## Journal

### 30 December Wednesday

I worked in lab until my turn to conduct the activity study. The tour on the tower was very boring and nothing interesting was happening. After dinner I collected Berleze samples and checked the albatross nests. I went back up on the tower from 1430 until 1615 when roost counts were made for the report.

After supper Cam and I went out and banded Red-footed Boobies and Frigates. When we were going around North Point we caught a Glauco's winged full and a Black-legged Kittiwake which cards were made out on the birds. The Kittiwake will be collected since it has a bad cut on its neck. Cameron does not want to collect the bird but I will kill it if I have to when He is gone from the lab. He wants to band the bird and release it but, I don't feel this would be wise since it has a cut 1 and 1/2 inches long on its neck. The bird appears healthy but the cut looks raw and would eventually kill the bird anyway.

### 31 December Thursday

We conducted the seabird and seal census and counted the albatross nests.

There was a 27 percent desertion of nests in the South Antenna Field where John Bushman and his crew mishandled Albatross which were on nests. This area was protected from the storm so I don't feel that the desertions can be blamed on the storm. When they collected blood samples they were rough and threw the bird when they were through. From the blood samples we have collected I don't feel that they would go back to the nest when they were disturbed.

I checked the Laysan control nests where there was no disturbances on the nests. There were three deserted nests of the 50 which were staked.

I killed the Black-legged Kittiwake and skinned the bird.

I collected Nest litter from Laysan nests for the Berleze funnel.

I participated in the New Years eve celebration half heartedly since I had to work in the morning.

D. L.  
Stadel  
1965

P 214

## Journal

January 1, 1965, Friday

I checked the albatross nests and then spent the afternoon putting up the bird skin of the Kittiwake.

2 January Saturday

Cam and I collected banded samples and parasites and weight and measurements, on Laysan Albatross. One died so we collected the bird for a study skin. I had to skin the bird and clean it partly at night.

3 January Sunday

Since it was Sunday I checked the Albatross nests and collected Berlese samples from the central roost. The rest of the day I spent playing touch football and enjoying myself.

4 January Monday

I worked on the Laysan skin all day and finished before supper. I checked the albatross nests and collected Berlese samples. Banded Bonin Island Petrels.

5 January Tuesday

Checked the Albatross nests and collected weight, measurements, blood and parasites from Laysan Albatross. I skinned a Golden Plover. Worked on banding forms for 1964 to send into Mrs Church.

I went around north point to check for seals and on the way back I found a large fishball with a net.

6 January Wednesday

I worked on Brown Booby data in the morning and skinned and cleaned an Laysan Albatross skin in the afternoon since it rained. I collected Berlese samples and checked the albatross nests and checked the south end of the island for seals. I worked on Brown Booby data in the evening.

7 January Thursday

I worked on Brown Booby data in the morning and checked the Albatross nests. Cam and I collected data for Mc See cards and blood samples in the afternoon. I walked around the beach checking for seals and found some strange bird which I could not identify since it was in bad shape and will have to be identified by skeleton. *Pterodroma*

D.L.  
Stadel  
1965

P 215

## Journal

8 January Friday

I conducted the activity study in the early morning and after dinner and after supper. After my 1400 watch I checked the albatross nests and checked the beach for seal.

The behavior of the Red-footed Booby does not make sense, in the morning all the birds I saw went to sea in some direction of north and at night when they came back there was about an even number coming from the south and north. I don't know if I missed the birds going south or if they circled around the island or if they were drawn south by some feeding flock.

I feel that the Brown Booby does much of its courtship in the air. Last evening there were several pairs flying around together, there did not seem to be any attempt to feed. They were flying around the ~~island~~ island with no apparent purpose. They do not land until it is almost to dark to land. I feel that they do the majority of their courtship in the air and also pair formation.

The albatrosses which fly around the island during the day land at night to rest or at least get out of the air. I have never seen an Albatross flying at night.

9 January Saturday

We conducted the shorebird and seal census and counted the Albatross nests. I worked on Brown Booby data and collected Forleze samples and banded Bonins, and checked the Albatross nests.

Dave worth and Sam and I went skin diving in the ocean.

10 January Sunday

Since it was sunday, we checked the albatross nest and collected blood from sick Laysan Albatross and I worked on Blue-faced Booby data, taking out Mc Gee cards for all the weight and measurements I collected last August and September.

Q.L.  
Stadel  
1965

P 216

## Journal

### 11 January Monday

Cam conducted an hourly census of the Blue-faced Booby colony to check and see which birds were in the colony when. It rained most of the day so I worked in lab on Blue-faced Booby data which I had collected last August and September. I collected the albatross nests and banded Bonins.

### 12 January Tuesday

I got up and skinned out an Albatross in the morning and cleaned another one which was in the freezer so it is ready to stuff. In the afternoon we collected blood parasited, weight and measurements from Laysan albatrosses. We collected Laysan returns and after supper I conducted a seal census since Sand Island is only 30 feet long. We checked the Albatross nests and banded Bonins.

While I was conducting the seal census I found number 226 which has just been bitten by a shark and has a bad cut in its back. I don't see how any seal could live through that cut but there are several seals with cuts which look just as bad. I took pictures and described the cut in the seal notes.

### 13 January Wednesday

I paid the skipper a nickel to cut my hair just for laughs.

Cam and I check the same areas which we checked yesterday for returns and found 41 birds and 16 more which we had painted yesterday.

We went out to collect blood from one of the Laysan which was sick and could not collect it because we could not find the heart. Cam was through the South Antenna Field last night at 2300 and found a sick bird and this morning at 1100 there were two dead birds and one more about to die from the creeping crud. The terrible back disease where the back rots away.

I conducted a seal census after dinner and counted 62 seals on the beach.

I saw two Glaucous Gulls bout immatures at south Point. There is also an adult Glaucous or Glaucous - Singed Gull on the island.

D.L.  
Stader  
1965

P217

## Journal

14 January

Today was that day again that we had to conduct the activity study and it was as usual a windy miserable day. I had a fairly interesting morning on the tower but in the afternoon nothing of interest happened.

I conducted a seal census and counted 62 seals. While I was not on the tower I worked on Brown Booby data which I had collected last summer. There is no sand island so the seal count was high.

15 January Friday

Today was a good day for seal tagging, Jim Priest helped up and we used a new method and tagged 20 seals in two hours and 5 minutes, and would have tagged more except we ran out of tags. We used the canvas litter that was made to weigh seals in. We put the heavy canvas litter over the seal and then sat on them or layed on they. The piper along the edge of the litter kept the seal from sticking its head out and biting us. Jim and I could catch seals faster than Cam could put the tags on and record what was caught. In one period we tagged 4 seals in 15 minutes. The wind was blowing out of the west at 30 knots so it was easy to catch the seal, and after being tagged they would just lay where we removed the litter. We removed the chain on one end so it would open up wide and it was easier to put it over the seal, one end was left intact so the seal could not get out of the litter.

I held the seal and smooched with each seal, since I had not smooched for 7 months.

I worked on Brown Booby data in the afternoon since it rained.

I worked off my half of the report. I checked the Albatross nests.

16 January Saturday

We conducted the shorebird and seal census and Albatross count. I finished the report and spent the rest of the day wandering around the island with Rock Happiness wishing I was somewhere else, it is one of those fits which hit after 6 and 1/2 months in the field. I want to go home, home, home, home, home.

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Stadel  
1965

Journal

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17 January Sunday

I worked on Brown Booby data that I collected last summer and spent the day wishing I were home or any place but here. It was a common feeling that hits the male species when on isolated stations.

18 Jan Monday

It was raining part of the day so I put up two Laysan Albatross skins.

19 January Tuesday

I put up two gull skins one was a Glaucous and the other is a Glaucous-winged Gull. It rained much of the day.

After supper I felt like walking on the beach to goof off so I conducted a Seal census while I was checking the Albatross nests. There were 63 seals on the beach and the number was high since there is no sand island.

20 January Wednesday

In the morning after breakfast I went to south Point to check the beach for gulls and there was a strange bird so I shot it and it turned out to be a Herring Gull.

I saw seal number 226 which the shark had bitten on 12 January. It was laying with its head just out of the water and appeared like it could or could not move onto land. The seal had lost at least 100 pounds. The cut is deeper than I had originally thought, it is 2 to 3 inches into the meat on the back. The fat is a pale yellow instead of the normal dark yellow. The meat is very dark red. The cut bleeds when the seal moves. It does not move well on land and will not crawl far onto the beach. The seal swims almost normal, but slowly using its hind flippers. I took 3 more pictures.

I found a dead Immature green Frigate in the north Roost which had apparently died from the band being too tight. Cam and I have found 4 or more with this problem.

checked the north Roost for Frigates & Red-footed Booby eggs but don't think there are any

D.L.  
Stade/  
1965

P 219

# Journal

21 January Thursday

Today was that day again when we tried to convince the Coast Guard that we are crazy, they think we are strange but sitting on a tower all day convinces them that we are more than strange and I agree with them. I worked on paper work in the times when I was not on the tower.

The monkey came up on the tower when it was partially light and I fed it an orange which he ate with apparent delight. Its ribs are showing now and he is lean and hungry. When he was offered an orange a month ago he would not eat it.

I checked the Albatross nests and banded Bonin Island Petrels.

22 January Friday

Today was a day. I checked the beach in the for strange calls but there were none. I went to North Point to collect the seal skeleton which had been there for the last 10 months. The recent storm washed the bones which were on the top of the ground all over the area and then the wind piled the sand one foot deep over the top. The area now looks like I dug a grave for an elephant. I did not find all the bones but I did get the skull and the majority of the large bones, I will go back later after the shore birds have worked over the mess.

Sam and I collected weight, measurements, blood, and parasites from Black-footed Albatrosses.

After Chow I walked to North Point to check for seals and make sure there were no eggs in the Frigate and Red-footed Booby area. There were no eggs.

I saw the injured seal 226 tonight again. As far as appearance there is no difference that I can see from two days ago. It is something that it is still alive.

Bob Chapman and I went to the Radar tower to feed the monkey tonight we fed it an apple or at least part of the apple.

I saw 12 Brown Boobies on North Point, 4 were adults and 8 were immatures. This seems to be the pattern of more immatures than adults.

Banded Bonin Island Petrels.

D.L.  
Stadel  
1965

P 220

## Journal

23 January Saturday

Cam and I conducted the Shorebird, seal, and Albatross nest count today. I covered the beach in 2 hours. After the Shorebird count I skinned one stuff a Herring Gull. After glow I overhauled the scooter. I banded Bonins.

I saw seal 226 on the beach but could not see any difference in its condition. The meat on the back may be getting darker but I could not tell.

24 January Sunday

Bob Standish arrived to the Pacific Paradise today and am I glad, we can get many things done that could not be done with two men.

I stuffed two birds this morning and then the plane came at 1400. Cam and I showed the island to him and generally acquainted him with the procedures on the island.

Cam found two Bonin Island Petrel eggs on the Shorebird census saturday.

While doing weight and measurements on Black-footed Albatross we noticed that some of the birds had black and some white feathers at the base of the tail on top and underneath. Tonight Bob and I picked up 67 birds and read the band numbers and kept track of the color at the base of the tail, and whether the brood pouch was bare or covered and if there was any down coming in on the brood pouch. We handled only the birds not on nests, along southwest beach. Several things soon evident after handling this few birds, and these things will be cleared up as we progress with collecting all the returns on the island. Things I think will prove out: (1) There are two phases and all immature or rather sub-adult birds which have never bred have dark at the base of the tail. We banded 9 new birds of which eight were completely covered with down on the brood pouch and all of the 5 were dark birds the other bird had white at the base of the tail and the brood pouch was only partially covered with down. (2) I could feel a distinct difference in the weight of the birds which were dark, they were lighter.

DL  
Stadel  
1965

Journal

24 Jan [Cont'd]

(3) Not all birds which are dark are immatures, since some birds which are sitting on nests are dark. The majority of the birds sitting on nests ~~are~~ are light birds. (4) I feel that the difference in white and dark is age, the birds gradually change in color from dark to white as the bird gets older, but this is not consistent in ~~all~~ individual birds. (5) Birds which had their nests destroyed this year by the storm are developing down over the brood pouch. Several birds which were study birds are developing down over the pouch. We set rat traps for the monthly grid trapping. We had to replace three traps which had been covered or blown away by the storm.

I saw a unique thing today, a change over in nest attendance of a Black-footed Albatross. While I was checking the nests red and green of nest number one changed. The chick had already hatched two or three days ago. Green was sitting on the nest and red was holding its head lower and pushing on the other bird. Both were making their ~~an~~ egg call and Red slowly pushed green off the nest and took over the chick. The pushing did not take more than 2 minutes but I don't know how long the two birds had been sitting and calling to each before the actual change over took place. Red is the male and green is the female.

25 Jan many Monday

Today we's rat trapping and the hardest day of the trapping. We start'd at 0730 and finished all but the rows before dinner, we completed the task about 1500. There was a small rain the night before and the vegetation was wet. It was still cloudy when we start'd and only cleared up partially by noon. I handled the rats, Cam recorded and Bob weighed the rats. The rat data will explain any population make-up.

I checked the Albatross nests and worked on paper work in the afternoon. Bob and set traps after supper and make sure that all of the traps ~~were~~ were operation.

D. L.  
Stadel  
1965

Journal

25 Jan [Cont'd]

We found a Hawaiian Noddy while doing the rat trapping this morning, its wing was covered off, collected Berlese samples from the South Antenna Rd.

Bob and I walked around South Point to pick up returns on Black-footed Albatrosses. I am sure now that all ~~the~~ sub-adults are dark birds. All adults that have eggs are not light birds so it is a gradual change from dark to light that occurs over a period of years. I can distinguish difference in the amount of white at the base of the tail, but it may not change as the bird gets older.

26 January Tuesday

Rat Trapping again this morning and it was fun. There was a light rain during the night since we set the traps but I don't think it affected the working of the traps much. We had several traps which did not work because of sand under the treadle. There were other traps which were tripped but no ~~no~~ rats. Yesterday I left all the traps open which did not work or were dirty and I felt that they would not work. I also fixed traps as we were trapping. We started at 0730 and finished at 1100. The morning was cool and comfortable.

I worked on data all afternoon trying to clean off my desk so I could see it. It rained after evening chores so we did not try to pick up recoveries or returns.

While checking the Black-footed Albatross nests I observed a rare phenomena, the adult was standing up when I checked the nest and I could see the chick which looked like it was at least developed 60 days but the adult left when I approached the nest. The egg had maggot or some sort of crawling worms. Apparently the rotten egg was giving off some offensive element which made the adult not want to sit on the egg.

We set the rat traps in a slight rain hoping it would clear off and dry off before morning.

DL  
Stadel  
1965

Journal

Southwest Beach

Black-Footed Albatross Returns

Right Breast

1-24-65 65 Returns; 9 Banded Painted Red

1-25-65 36 Returns; 13 Banded. Green on R. Breast

We saw 8 Red ones

D.L.  
Stadel  
1965

Journal

27 January Wednesday

The wind last night blew out the Seaway so it was pleasant trapping. We started at 0730 and finished at 1030. The traps were mostly in working order except for 4 or 5 traps. There were traps left sitting open with oatmeal in them and they were working but no rat was caught. The minimum temper. ture was 50 and it was cold so that several rats were very cold and weak. We collected three rats which were dead in the traps or so weak and cold that they died when I placed them in my pocket. Three different rats recovered when I placed them in my pocket. One rat lay in my pocket for two hours and did not move but when we got back to the lab he was running around and so I placed him in a cage hoping it would recover, his right hind leg is stiff and he limps. This rat in the cage does not respond when I make the squeaking noise which wakes rats up. He just sits in the cage and shivers from side to side, he is very weak and I don't think it will make it.

I checked the Albatross nests and worked on data in the afternoon and hoped my sprained leg would heal before I had to trap again.

28 January Thursday

We trapped rats again from 0730 to 1100 and finished for the month. I could hardly walk from a sprain. I worked on Brown Booby data in the afternoon and wrote a summary of the rat trapping for Wirtz.

After Supper Bob and went out to check the Albatross nests and then walked to the North Roost to check for Red-footed Booby and Great Frigatebird nests. I found trail that Warren King and Roger Flapp had cut and I had never found before. We could wander all over the roost and check for nests. There was one adult Female Frigate sitting on a nest of Cratylus cistolinus, but there was no eggs, this was the only sign of a nest that we found.

I collected Berlese samples

D.L.  
Stader  
1965

# Journal

29 January Friday

We conducted the activity study all day and I of course checked the Black-footed Albatross nests. I went to the North Roost and cut trails and checked the roost for eggs and collected Perle's samples.

It was a one-legged Black-footed Albatross today. Only the right leg remained and it could hop well enough to get air-born.

Bob Stander and I banded 100 Red-footed Boobies and Frigates, a 1 had to be caught by stomping through the Scaevola and we were tired the next day. We found a Red-footed Booby egg which had been deserted and was still warm but will be destroyed so this was the last night on banding in the North Roost.

30 January Saturday

We conducted the Shorebird and seal census and I wished I was home. Twenty-eight percent of the Laysan eggs have hatched out. I was in that mood again. Bob and I went down to the Kure island Biltmore and improved relations with the crew and improved our moral.

31 January Sunday

I still had that mood today. I got a letter from Marilyn which was a surprise to me, in fact it knocked me off my feet with surprise and .....

1 February Monday

Worked on the report all day. Checked the Albatross nests and worked on the report during the evening.

Bob and I tried to go around North Point to pick up Black-foot and Laysan Returns but it rained and we came back after handling 37 Blackfeet and 31 Laysans.

2 February Tuesday

Worked on the report in the morning and filled out recovery forms all till the plane arrived and then I worked on the scooter and cut trails through the Scaevola.

I checked the Albatross nests and looked for seal number 226 and found it at K 24. It had progressed to the point of the large hunk of meat is about to fall out. I took pictures. The seal is getting better.

D.L.  
Stadel  
1965

P227

## Journal

2 Feb [Cont'd]

Bob and I went out to band Red-faced Boobies and Frigates on the south end of the island and we only picked up 7 birds to band and we collected 5 returns which was poor but the Scaevola was too tall and before we could get to the birds they flew. I can banded 30 Bonin Island Petrels.

3 February Wednesday

Bob and surveyed the sewer line so the inspector Steve Massie could tell the Coast Guard District what the sewage problem was on Vireo. There was an 8 and 1/2 inch drop in in 219 feet.

We tried to collect a Glaucous and a Glaucous-winged gull this morning but they flew.

Bob and I worked on a Microclimate study which he had set up. He had a accurate map of the island which we were marking on the map the locations which we took the relative humidity and temperature and soil temperature and wind direction.

We found a Bonin Island Petrel which had an egg in it when it died and the bird was eaten and the egg was sitting in the middle of a pile of feathers.

The evening was a new experience which all good ST personell should have to go through. We had a tidal wave alert and had to spend on the barracks roof for three hours, I don't mind waiting the three hours but we did not get any birds banded or recover any birds.

4 February Thursday

Today we conducted the activity study and I filled out banding forms. I spent two ours talking to Luten-andt Steve Massie of the U. S. Coast Guard district, he is completely showed and I liked him very much so it was not just politicking. He wants me to stop in and see him when I go through Honolulu, Phone 511-956

I worked on banding forms and completed them so they could go out on the plane with the report. Cookies from home for my birthday.

D.L.  
Stadel  
1965

Journal

5 February Friday

Bob and overhauled the scooter, setting the points and plug and it surprisingly still run. I worked on return forms for Black-faced Albatross and worked in lab in the morning on paperwork. In the afternoon Carl and I went out and collected weight, measurement, ecto-parasited and blood from Black-faced Albatross. I also checked the North roost for Frigate and Redfoot nests and eggs but did not find any. There were Frigates sitting on nests but no eggs.

Bob saw Seal 226 at north point so it is moving around the island now and there is a marked improvement in its general condition, I think it will live.

Bob and I went out to collect returns and banded Laysan and Black-faced Albatross last night and finished off the string banding.

I checked the island for gulls and cormorants, there were none.

Bob and I picked up Laysan and Sootyfoot returns and banded them and Red-footed Boobies and Great Frigatebirds.

6 February Saturday

Bob and I picked up returns from Laysan and Black-foot.

We conducted the shorebird and seal census and I worked on Return forms.

7 Feb Sunday

Sunday is a day to change the gear so I packed up and collected returns all day. We collected 253 and banded about 80 birds.

I received a letter telling me to leave today but I could not get ready to leave in two hours.

I am so damn short I can't even type my notes. I may go home and not handle another bird for two weeks.

D.L.  
Stadel  
1965

P 229

## Journal

8 Monday February

Bob and I picked up 146 returns from Laysan and Black-footed Albatross, and by the time I had recorded the data it was all the day gone.

We now have a total of 645 birds returned and 201 banded.

9 February Tuesday

We picked up returns today, we picked up 259 returns. Today gives us a grand total of 1046 returns and 294 banded this report period. This is a total of 63956 1350 birds handled and I am getting tired.

10 February Wednesday

Bob and I picked up returns on albatross and I packed.

11 February Thursday

We caught another ~~one~~ Mes. musculus today which will be autopsied & saved for a skin and skeleton. I finished packing and left for Midway.

12 February Friday

Took care of business on Midway and left on the 4:30 flight. I met Alan Anderson on the plane and showed him the island. I arrived in Honolulu at 22:30 and left for Seattle at ~~10:00~~ <sup>10:00</sup> 08:00. Arrived in Seattle at 09:00, picked up MAF at 11:00 & WOW,

D.L.  
Stader  
1965

9238

# Journal

12-13-14 Sat, Sun & Mon

M.A.H and I had a ball  
and I visited Dr. Orions to  
talk about Graduate School.  
We roamed all over Northwest  
Washington

125

15 February Tue

on flight home

16 Feb Wed.

Worked at home

17 Feb Thursday

Worked at home & went to Baldwin

18-19 February Friday & Saturday  
Spent the days at Baker.

20 Feb Sunday

Visited Conrad at K-State

21-22<sup>23</sup> Mon Tue - wed

Worked at home

24-25 Feb Thursday Friday

went to Gays to visit  
Graduate Students and Teleshay.

D.L.  
Stadel  
1965

P 231

## Journal

26 February Saturday

Flying to Seattle. arrived  
at 0300. Plane ticket \$108.50

28 February Sunday.

Travelled around north west  
of Seattle with Marilyn  
Grey. I had a Volkswagen car  
which cost only \$13.95 for the  
day.

I saw a fox Sparrow,  
Common Tern ~~Bruchit~~ Bruchit,  
Western Gull, California Gull,  
Glaucous Gull, Glaucous  
Winged Gull, Common Scoter,  
Surf Scoter, Pintail  
Scaaler, Salmon Skinned  
Flicker.

My ticket from Seattle  
to Honolulu cost \$110.17  
and 14<sup>94</sup> for special baggage

I left Seattle at 1655.

Flight 150 to Fiji.

I arrived in Honolulu at 0700  
2100.

D.L.  
Stadel  
1965

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# Journal

14 March Sunday

## Species Account of Laysan Island

Laysan Albatross *Diomedea immutabilis*  
We banded 220 chicks  
on the island and I think that  
is between 70-80 percent of  
the population. If you figure  
65-85 of the chicks were banded  
that would give a total pop-  
ulation of ~~maximum~~ of 3384  
and a ~~minimum~~ of 2587.

There seemed to be a larger  
percent of the population that  
was weak from not being  
fed. The chicks in the Diagnos  
were often weak. Possibly  
because of the parents not being  
stimulated sufficiently by the  
chicks to land in the rough  
areas and have trouble taking  
off again. We most commonly  
found Laysan chicks in the  
open areas where there ~~was~~  
was no Crocosmia, (only  
Sporobolus indicus). Roger Clap

D.L.  
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## Journal

14 March Recont Lisianski

and I banded 700-800 birds  
on the beach.

There are Albatrosses setting  
all over the island which <sup>run</sup> when disturbed, they fall into  
Roxin Reservoir which is  
possible frustrating to them.

I don't think Laysan could  
do their courtship dance  
without difficulty. I see  
Laysan with nest in half  
Craggs may land at their  
nest sight but they appear to  
walk to the beach to take  
off again. We have seen  
Laysan begin spring in the  
Seascale, it seems to be a  
good way to the beach.

There is probably a Laysan  
adult population on the island  
of 8-10 thousand. There are  
many more times this figure  
that use the island.

With all the Roxin reservoirs  
it is hard for the

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1965

# Journal

14 March [Cont.]

Lisianski

Black-footed Albatross; Piameles nigripes

They nest primarily along the beach and in open sandy soils ~~not~~ connected to the beach. I found only 4 or 5 chicks in Crassostrea virginica ~~at~~ away from the beach.

There are between 1000 and 2000 chicks on the island. We saw less adult than chicks on the island.

Bill Westy picked up a Blackfoot that was banded on Kure.

Bonin Island Petrel; Pterodroma hypoleuca

There are a Blue-gillion of them on the island according to Bill Westy. Walking across the island is unbelievable. Every square foot is either covered with dunes or there are burrows under the surface, you step and fall through. You fall through about the point in your step when your legs is stiff & it goes until after several hours your feet feel like they will come off.

D.L.  
Stadel  
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## Journal

14 March Cont'd Lisionisti

There are birds over the island during the day & settling on the ground. About 1600 they start to increase in number & they can be seen in large numbers flying over the water near the island. The sky is filled with them at night. & These are burrows all over the island.

There is no easy to estimate the population but we banded 3 thousand birds in less than an acre & there were still un-banded birds & the change over rate would account for more. There must be over a million birds on the island.

There were eggs on top the ground which had been broken. I found broken eggs with chicks almost fully developed.

I heard birds running into each other in the air while I was banding at night.

They make the island very unpleasant to walk on.

D.L.  
Stadel  
1965

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## Journal

14<sup>th</sup> March [Cont'd] Laysan Atoll

Wedge-tailed Shearwater Puffinus pacificus  
Two separate birds were  
seen on the island, both at  
night.

Christmas Island Shearwater.

I saw 10 of this species the  
first afternoon sitting under the  
Sesuvia in pairs. They were  
a common sight during the afternoon  
and at night. They were found all  
over the island where ever there  
was Sesuvia.

I would guess there were 500  
to 1000 birds.

Roger Clapp checked the brood  
pouches & found none bore so  
they are not on eggs.

I heard them mating call  
while breeding at night (they were  
flying over head) and during the day  
they would sit in pairs & call  
to each other.

Sooty Storm Petrel

I thought several times at night  
I heard them call but was not

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Journal

14 March [Cont] *Lisianski*

sure and it could have been a  
Gray-backed tern.

Red-tailed Tropicbird; *Phaethon rubricauda*

Van Hoorn banded 17 one  
day, he found one or on eggs.

I counted 20 over the island  
swinging their tails while flying  
around (courtship flight).

Red-footed Booby; *Sula Sula*

Van Hoorn found one egg.  
These are adult males with  
nest and clean stay calling  
platforms built but no eggs.

They nested and roosted in  
small groups all around the  
island using Scawala.

We collected blood samples  
and two returns but did not  
band any of this species so  
it is very hard to estimate the  
population; I would guess  
there are 2 thousand on the island  
and probably more.

D.L.  
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1965

Journal

14 March [Cont'd] Laysian R.

Blue-faced Booby; Sula dactylatra

They are all along the beach.

Roger Class and I handled 230  
one night & did not catch  
but  $\frac{1}{3}$  of the birds as we went  
around the island. We only covered  
3/4 of the island before we quit  
for the night. Just after we quit  
we saw a club of 100 or more  
birds sitting on the beach. I  
would say there is a population  
of 1200 birds  $\pm$  300.

There is one chick about 60-70  
days old and the next oldest chick  
is about 28 days and many of the  
adults are sitting on very young  
chick or eggs. 60-70% of the  
nesting population is sitting  
on eggs.

Brown Booby; Sula leucogaster

Seven was the most seen at  
any one time. I found one sitting  
on two eggs. There is probably  
a population of 20-30 birds.

Roger saw one immature.

D. L.  
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Journal

14 March [Cont.]

Lisianski

Sooty Terns; Sterna fuscata

There was a population of about 5-10 thousand. They are flying in large groups over the island. They were sitting on the ground in open spots between Sporogrostis variabilis. They were sitting around in pairs dancing around. The number gradually increased in number over the afternoon until the largest number was over the island at night.

There were no nest on the island.

Grey-backed Tern; Sterna leucosticte

We banded about 400 of this species and all were sitting on eggs. We did not even touch the breeding population. There were nesting colonies all over the island in Sporogrostis variabilis and in Ischaemum taccada.

I would say there are at least 10,000 breeding individuals on nests and a total population of 15,000. Only about 7.5% of the population was were on nests.

D.L.  
Stader  
1965

Journal

14 March

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We found one small chick  
which could not have been  
over 3 days old.

Common Noddy; Anous stolidus  
I found only one nesting area  
west of the South Casuarina  
tree. It was under Scascola  
on top of the ridge. There were  
from 45-75 nests. I found  
one dead chick which was  
about 3-7 days old. There are  
still birds on dancing around that do  
not have nests.

Hawaiian Noddy Terns; Anous minutus  
about ~~50-75% of~~ 50-75%  
of the population are on active  
nests. Vin Hoeman found 4-5  
chicks. They were nesting in  
the Casuarina trees. There were  
nesting colonies in Scascola bushes  
bushes all over the island.

There was a population of 2000  
± 1000. The way they were scattered  
out I have no real idea of the

D. L.  
Stadel  
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## Journal

14 March [Cont'd]

histoishi

population.

Fairy Tern Gygis alba

There were nesting birds at various points over the island, in Casuarina trees and in Icaacela. I saw at least 25 nests. I would say the population was about 100.

Ruddy Turnstone Arenaria interpres

There were from 30 to 100 thousands

I would not even want to guess. We saw large flocks flying around over the island with at least 100 birds per flock. Perhaps this large flocking behavior is characteristic before migration.

The wings of 48 birds of this species were found under the Casuarina Tree, presumably eaten by a Peregrine Falcon.

The birds were found during the day scattered throughout the island feeding. They were seen feeding on carcasses of dead birds and on broken eggs.

D.L.  
Stadel  
1965

Journal

14 March (Cont'd) Lisionisti

Golden Plover *Pluvialis dominica*

There were several hundred of this species, probably about 4-5 thousand ~~checked~~ on the island.

They were found scattered throughout the island. Large flocks of up to 1000 birds were seen.

Sanderling *Calidris alba*

Three birds were seen at once but possibly there were more on the island.

Black-bellied Plovers

Two were collected on the east beach by Roger Clapp.

Bristle-thighed Curlew

There was a flock of about 30 which hung out on the rocks east of the island along the beach. They were all along the beach and in the Eragrostis over the island.

Bill Giltz saw three flocks of 30 or more birds fly by the is. sure they were separate flocks. There were probably 150 to 200

D.L.  
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## Journal

14 March [Cont] *Lisianski*

of this species on the island. They were tame and I took several good pictures of them.

Glaucous-winged Gull *Larus glaucescens*

Roger Clapp shot one near the south end of the island which was still alive but swimming away from us so we could not collect it.

When we were going dry working on Blue-faced Boobies we saw it on the beach and picked it up. It was still alive and we obtained a blood sample from it.

Peregrine Falcon (Duck Hawk)

I was the only one that got a good look at the bird. It resembled one of a Sparrow hawk but it was too big. This is a life bird for me, but it looked like all the pictures I have seen. It is possibly an immature because it was reddish brown. I was not positive of my identification.

D.L.  
Stader  
1965

Journal

14 March

Lisionisti

This bird was only seen on the island once flying down the beach. When it flew over the Ruddy-thighed Cormorants I was watching flew in a compact group.

The Falcon was feeding in one of the Casuarina trees. Roger Clapp found 48 Ruddy Turnstones, 22 Golden Plovers, 3 Grey-backed Terns and One Hawaiian Noddy.

When Shorebirds flew they would come up and fly low which is common for shorebirds that have been chased by a predator.

Great Frigatebird Fregata minor. There were about the same number of Frigates as Redfoots. There were about one half of the adults with inflated pouches, and the other half of the males were sitting on nests or the color of their pouches were not bright red. When the adult male is

D. -  
Stadel  
1963

Journal

- 14 March [cont'd] Lisienski

is sitting on a egg and courtship  
is completed the color of the pouch  
fades to a dull red.

There was a population of about  
2000 on the island.

We spent the morning wandering  
around the island taking pictures  
and doing any thing we wanted  
to. We banded 400 Grey-backed  
terns which were on eggs.  
We broke camp and left the island  
at 1500.

We spent the night getting re-  
organized to go ashore on Pearl  
and Hermes Reef. We went to bed at 2100.

I did not like Lisienski at  
all because of all the lizards,  
in other words the island sucked.

D.L.  
Stader  
1965

Journal

Southeast Islands

15 March Monday Pearl & Hermes Reef.

We arrived at Pearl & Hermes at 0730 while we were eating breakfast. The landing was smooth except we came over the reef.

The island is small but I like it.

Most of the afternoon was spent banding Laysan Albatross chicks and Ken Amerson helped Charley Williams collect blood samples.

Bill Wirty and I started mapping the island by using a compass. We have a east-west line over the island and every 100 ft we are measuring to the edge of the Lagoon and also measuring the vegetation patches.

The dashing rains started at 1930 while we were still mapping the island. It rained all evening so we went to bed and worked on field notes hoping it would quit so we could do some work at night. It did not stop all evening and we

D.L.  
Stade  
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## Journal

15 March [Cont'd]

had 30 knot winds. The tent  
about went into orbit. The  
tent fell out the water but  
everything was damp.

16 March Tuesday South east Island

At exactly midnight the tent  
went into orbit and the canvas  
flap left its launching  
pod between the two tents  
last, fortunately it was a  
fizzle & did not go too  
far.

My god what a three ring  
circus, I had not had that  
much fun for a long time, had  
we all were in sleeping cloth  
trying to hold down both  
tents and stake them better.

We buried all the stakes 2 ft  
& drove them into the coral  
I thought I would die laughing  
seeing G. G. in his B.V.D.s trying  
to hold down one corner of the  
tent and it was lifting him  
off the ground all the time

D.L.  
Stadel  
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## Journal.

16 March

Roger Clapp was asleep and only helped with the last half of the fence. He heard talking or he would not have woke up. We were all laughing and double stakes all the corners of the tents in the rain. What a blow down!

Ken & Rogers tent blew down two more times during the night.

I slept in mortal fear that the tent would come in on top of us again during the night while the cold wind blew & rain it rained.

Oh! God it is a day. Well it rained until 1200 and we huddled around the fire in a tent waiting for it to clear. Finally at 1230 it stopped raining for short intervals so we could work. We banded Laysan Albatross chicks and mapped the size and vegetation of the island.

There are about 20 Red-footed Booby nests on the island and one had a chick ~~20-30~~ 30 days

D.L.  
Stadel  
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Journal

16 March [Cont'd]

old which died while we  
were on the island. Many of the  
Redfoots are banded.

Aleventy-five percent of the  
Frigates appear to be on nests.  
Most of the nest were destroyed coll-  
ecting returns and blood samples.  
There were 20-30 nests on the island.  
There is a population of 100 to 200  
birds on the island.

There are about 30-50 Common  
Noddies and one was on an egg  
and many have nesting platform  
getting ready to nest.

We found Christmas Islands  
Shearwaters on the island, also  
probably 12-20 birds on the island.  
They were sitting around on the  
ground.

Pacific Noddies are on eggs  
which we feel were laid while  
we were on the island. There  
are only few on eggs. There are  
about 50 birds on the island.

D.L.  
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Journal

16 March [Cont.]

We counted 25 Brown Boobies sitting on the reef so there are probably 40 to 50 birds since there are 10 to 15 nests.

We banded 325 Wedge-tailed Shearwaters. There were probably 100 birds on the island last night and probably 1000 birds using the island.

We banded 35 Bonin Albatross Petrels so there were about 100 to 150 birds on the island. We found a young Bonin Chick. Their burrows were in dense vegetation where there was sufficient humus to support the sand.

We banded 85 Sooty Storm Petrels. Many had chicks which we banded about 10. There are probably 100 to 200 birds on the island and around 1000 or more using the island.

D. W.  
Stockel  
1965

# Journal

Pearl & Hermes Reef

17 March Wednesday North Island

We left South east Island at 1100 for North Island, which is 10 miles across the open lagoon. It took 2 hours to get to South North Island and 20 minutes more to go to North Island. We used an old wooden wrecked Japanese ship on the reef, but we could not see it until we were an hour out of Southeast Island.

We pitched camp on North Island and started mapping and banding the chicks.

An immature Brown Booby was seen and about 20 adults. There were no nests on the island.

There was a flock of Common Noddlies of about 150 to 200 mostly on the east side. They had grown up to 40 days old, most being about a week old. There were only 4 chicks that we could find and about ten eggs.

There were 150 to 200 Hawaiian Noddlies nesting next

D. L.  
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Journal

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17 March (Cont'd) North Island

to the Common Noddies. There  
were nests but no eggs.

Twenty-two adult Red-footed  
Boobies were counted but only one  
was seen on an egg.

There were about 150  
to 200 Blue-faced Boobies  
on the island.

I saw a flock of 100 Ruddy  
Turnstones flying along the beach.  
I also saw 20 Golden  
Plovers along the beach.

Six Wandering Tattlers were  
seen along the beach.

There were about 40 Frigates  
Great Frigate Bird nests and  
a population of 150 to 200 birds  
on the island.

We landed Wedge-tailed  
Shearwaters, Bonin Island Petrels  
and sooty storm petrels at  
night.

There were 4 Fairy Terns  
on the island.

D. L.  
Stadel  
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Page

## Journal

Pearl & Hermes Reef

18 March Thursday North-South Island

We left North Island at 1000 and stopped at North-South Is. to land and map the island. It is an island 800 ft long with only about 300 foot having vegetation. The vegetation consists of Boehmeria diffusa, Lepturus, sempervirens and Dracaena cistoides and Psychotria<sup>(SP)</sup>. The island at its widest point is only 100 ft.

We spent 1 and 1/2 hours here before we finished.

There were 10 Blue-faced Booby nests and 30-40 adults on the island.

There were 14 Black-faced Albatross nestlings and about 20 adults on the island when we arrived.

We banded 4 Laysan chicks; there were 10 adults on the island when we arrived.

We saw one Wandering Tattler. There were 2 seal pups and 23 adults.

D.L.  
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Journal

18 March North-South Island

Vin Haemer Collected two  
Gulls on the island which  
I had shot at on North Island  
and they left after I shot. They  
appear to be Glaucom-winged  
Gulls.

We maped the island by  
racing off using a North-South  
line.

D. L.  
Stadel  
1965

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## Journal

Pearl & Hermes Reef

18 March [Cont'd] Kittery Island

We left North-South Island at 1300 for South east and it took two hours to go across the lagoon where the crew from the Seawanderer met us with water and food. Also took down the camp left on Southeast and piled it onto our leaking raft & so it could be sent back to the ship.

Then we took out for Seal Island. We passed Bird Island which had 3 sand spits around it and Seal Island which was a sand spit and it took 1 and 3/4 hours to get to Seal Island where we set up camp. Then Tim Hoerner Bill Weigley and I went to Kittery to map and band albatross. Bill and I mapped while Tim banded.

There were 200 Blackfooted Albatross chicks and 7 Laysan albatross nests.

There were 10 Blue-Faced

D. R.  
Stadel  
1965

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## Journal

18 March Cont'd Kittery Island

Booby nests on the island. I saw  
a Gull and a flock of 30 Ruddy  
Turnstones fly over the island.  
I did not see any vegetation  
on the island.

Today for the first time  
I noticed all the small shells  
there are in the sand on islands.  
Kittery Island had millions  
of tiny shells mixed in with  
the sand. They were of all  
colors and sizes. Some were  
in large and small packages.

After finishing with Kittery  
we went back to Seal Island

D.L.  
Stadel  
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## Journal

Pearl & Hermes Reef

18 March [Cont'd] Seal Island

There were 18 seals with two dead pups. We had to bury one of the pups because it stank & was close to camp.

There were 14 Blue-faced Booby nests and about 100 to ~~150~~<sup>150</sup> birds on the island. At night we banded 51 birds and collected 18 returns. Most were on the east end of the island on the sandy low part of the island.

We banded 40 Black-footed Albatross chicks on the island. There should be an adult population of several hundred (3-4 hundred) on the island but we only saw 50 birds at the most. We collected 4 returns from this species.

There was a flock of 13 Bristle-thighed Curlews on the island, but they seem to move freely from island to island over the atoll.

There were Grey-backed Terns with eggs, only 15-20 nests with eggs. They nested on a rocky beach to the ~~east~~ east end of the island.

D.L.  
Stadel  
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Pa 93

## Journal

Pearl & Hermes Reef

18 March [Cont'd] Seal Island

We collected a Brown Booby which had been banded on Kure. We collected 5 returns from this species. I have no idea of the population since there were no nests & I only saw 2 individuals myself.

We banded one Wedge-tailed Shearwater and I saw one other. We banded 33 Bonin Island Petrels and collected 2 returns. There was one egg found that was pipped. There were never more than 10 birds in sight at night. There was probably a total population of 3-4 hundred using the island and probably even more.

Banded 2 Sooty Terns, there was a flock of 1000-2000 over the Island.

Banded 5 Common Noddies. There were 100-200 present.

Also banded 2 Ruddy Turnstones d. of a population of 50-100.

Went to bed early? Rain

D.  
5/1965

PG 44

## Journal

19 March

"Pearls of Hermes Reef"

Was today a day or was it a night more. I guess the night more part of today started at midnight yesterday or this day and it ended at 1830 when we finally left the submarine raft and boarded the Shearwater. I rained all night last night and I was sleeping under a flapping (so called window if that wonderful tent) that I would like to take back to the dealer and stick you know where) piece of canvas. When it came up it let in rain & then came down with a noise I don't know if I did not sleep or if I just woke up between each noise. Then there is the matter of being damp and having rain falling on me.

The 4<sup>th</sup> code of trying to sleep when I awoke at 0700

1965  
Stan

P295

## Journal

19 March. Part 7

because I could not take it any more and the tent was falling down. One corner of the tent tore off and Ken Amerson & I ended up holding up the tent (of course it can be understood that it was raining all the time). The tent falling down was such a minor thing after having to put it up 50 times in 182 days. 1

We all got wet playing with the tent and then we sat around the tent all wet from 0700 until 1130 when it quit raining. I was as miserable as a human being can be without being sick and I could see that the other four felt the same as I did. We had up to an inch of water on the tent floor.

We mapped Seal Island and picked up camp to move on to Grass Island. The waves

D.L.  
Stadel  
1965

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## Journal

19 March [Cont'd]

in the lagoon were up to 5 ft. and behind us so it was not too bad. Also mapped Brass Island and banded 300 Laysan chicks and 100 Black-footed Albatross chicks.

After being on Brass for two hours we left for Southwest which only took us 45 minutes. Then we called the Shearwater again to ask if we could get through the opening in the reef east of Southeast Is. They replied we could.

The ride in the raft was wet and cold but bearable.

We were about one mile from the opening when our motor quit and would not start again. We lost communication with the Shearwater so then we were drifting toward the reef, we drug out the oars and paddled for all we were worth and up to the time we actually made it through the reef we did

D. L.  
Stiles  
1965

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## Journal

19 March [Cont]

not know if we would make it or smash into the reef. We must have paddled for one-half to an hour and we were about疲倦 and cold from taking in water.

I don't know what would have happened if we would have hit the reef but everyone seemed concerned. I had a life vest & had very little personal gear and was sort of aid of the reef. When we came into Southeast Island we did not hit the channel and went over the reef.

It was a very exciting and hairy experience which one looks back on but hopes never happens again.

We paddled as one to two miles with 700-1000 pounds of gear in a rubber raft. The riding ship felt good.

What a day this was! It is impossible to describe the experience of paddling and perhaps to save future injury.

1965 Hawaiian Lee Ward Trip

19 March cont

Species	Males	Pearl and Hermes Reef						Gross
		Southeast	North	South	Kittiway	Seal		
Laysan Albatross	5							
Nestling	15000	2,200	4,500	707	4	7	89	300
Black-legged Nestling		1	7	3	396	15	75	41
Wedge-tail	34		48	36			1	
Bonin Is. P.	2,396	3000	25				33	
Sooty Storm P.	89		45	26			6	
Red-tailed Tropicbird	1	18	3	2				
Great Frigatebird		1	5	10			14	
Red-footed Booby	7	1	1	1			1	
Blue-faced Booby	243	101	56	5			17	
Brown Booby	196	212	5	7	4		52	
	351	150	20	1			5	
Sooty Tern			1					
Grey-backed Tern		374					5	
Common Noddy				7			5	
Red-tailed Noddy			4	9				
Fairy Tern	24	10						
Laysan Tern	25							
Golden Plover	11		1					
Ruddy Turnstone	7						2	
Br. Sooty-tailed Tern	12	3						
Christmas Is. Shearwater	2							
Total Banded	18,088	5,817	4,637	1,199	24	83	236	489
Total Returns	124	158	97	55	1	0	30	65
Total Number Banded in 11 days							30,573	
Total	6	Reforms					480	

D.L.  
Stadel  
1965

P288

## Journal

20 March Saturday

We spent the day drying out gear and reboxing. We cleaned the storeroom.

I saw Sooty Terns Petrels off the ship when we were near Laysan Island at 1600. I saw 3 or 4 sets in the afternoon.

I talked to the purser, who is a very interesting individual, he has lost his business & is starting over in life by making money working on the Seawater. He lived in New Zealand for three years and has traveled over much of the world.

21 March Sunday

I stood watch from 1000 to 1200 and from 1900 to 1600. There were not many birds but we did see 110 Sooty Tern in two flocks close together.

I saw a Sooty Seawater which was a new bird for me.

OL.  
Stadel  
1965

# Journal

22 March Shearwater

I stood watch from 0630-0800, 1000-1200 and 1600-1800.

We saw a large number of Wedge-tailed Shearwaters considering the number of birds seen on the islands during the trip.

Early in the morning from 0700 to 0900 and at evening from 1700-1800 are the times when most birds are seen. It looks like there would be a constant number all the time but during the mid-day hours few birds are seen.

23 March Shearwater

I saw a Gray Blue-grey Noddy and a mottled Petrel.

I stood six hours of watch. There were birds and water out there today. Bore!

D.L.  
Stadel  
1965

Journal

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24 March Wednesday

We arrived in port at 0800 and spent the day unloading the ship and I bought field clothes. We had a meeting at Dr. Ely's tonight to discuss project policies?

25 March

I spent \$25.83 on paint for Kure today. I also spent \$32.06 on parts for the scooter.

I rode around town in the morning with Mrs. Ely and worked on the bonding forms for the Leonard trip.

Expenses

\$7.23	Coat
6.81	Hat boots
8.27	Tennis shoes
3.08	Hat
11.90	Rain Suit
3.80	Sun glasses
25.83	Paint
32.06	Scooter parts

D. L.  
Stadel  
1965

P 802

## Journal

26 March Friday

Today was a day to-choose. Longy Fisher, Roger Clapp and Paul Woodburn and I went deep into the mountains to look for birds.

There were Japanese White-eyes all over the mountains, as well as in trees in the low-lands. The species has taken over all habitats on the island except where crops are planted.

We saw a group of Black-crowned Night Herons at a mud flat east of Pearl City.

We saw a few Cattle Egrets at the same mud flat that we saw the Adornos at.

There were Indian Myna birds along the roads all along the low. They seem to have a distribution all over the island where man has disturbed the natural habitat. We did not see them up in the mountains.

Don  
Stahel  
1965

Journal

26 March [Cont'd]

We saw Ricebirds (Lorochura punctata) along a sugar cane field and in trees. There was a mud flat on the far side of the forest. I did not get a good look at the bird through field glasses.

I saw one House Finch (Carpodacus mexicanus) up in the mountains and I saw two yesterday eating in a palm tree.

I saw one ♂ Red-cested (Brauilia) Cardinal (Paroaria cristata).

We saw 50-100 Red-billed Piñtadas whenever we were up in the mountains. (Leiothrix laticauda)

We saw Booted Doves (Geopelia striata) They were seen every where we went except up in the mountains.

We saw Spotted Dove (Streptopelia chinensis) everywhere except the high mountains. They were not as common

26  
Sat  
1965

## Journal

26 March [Cont'd]

as the ~~are~~ Banded Dove.

We saw Yellow Sparrows,  
in flocks and associated with  
civilizations.

We saw Aspsane in the  
high mountains. (Himatione  
sanguinea).

We saw an Amakihi but  
I did not get a good look.  
with glasses.

Haber saw an Amakihi up in  
the mountains

We saw an Amakihi Loxops  
virens.

27 March Saturday

I read "Peyton Place" at the  
hotel & moved around.

28 March Sunday

Tine of us went to the Zoo  
to mess around. I started reading  
"Great Smith." I started running  
again to get rid of energy.

Startel  
1965

Journal

9305

29 March Monday

Ken Amerman and I worked on banding forms for the Leeward trip.

30 March Tuesday

Ken Amerman and I worked on banding forms and return and recovery forms.

Expenses

.40 Scotch Tape

\$4.12 Swim Suit

3.88 Shorts (jockey)

31 March Wednesday

Ken Amerman and I worked on banding forms for the Leeward trip.

\$33.92 Food on Shearwater

.45 Soap for Shearwater (birds)

1 April Thursday

Ken Amerman and I finished the banding and return forms for the Leeward trip. I am around finishing shipping gifts home and wrote 4 letters.

D.L.  
Stadel  
1965

At Sea for April p.306

Journal

Pat Gould  
Ken Amerman  
Dayle Husted

2 April Friday Paul Dumont

We were all on board by 0800 and left Pearl Harbor at 0900. Everyone had been out late last night except myself so much of the day was spent sleeping. We had informed watch and did not shoot at any birds since we were close to the islands of the chain.

I enjoyed the day and think I will adjust to the at sea routine.

There were large numbers of Rishers Petrels around the ship all afternoon. We saw a feeding flock of 70 birds. This was the first chance I had had to get a real good look at them. They seem to have a group of under wing coverts which are lighter in color, I kept getting a flash of tan. The bird is a dark brown. The flight seems to be half way between that of a Shearwater and a Storm Petrel.

O.L.  
Stadel  
1865

P307

Journal

2 April [Cont'd]

There were a steady stream of Sooty ~~or~~ Shearwaters going north all day. Never more than 4 or 5 in view at once.

I saw about 10 Christmas Island Shearwaters today. They fly like they had jet pulsers on. They have a short stock body and take several (4-5) sharp stiff winged beats and then glide for 20-50 ft. They are darker in color than the Bulwer's.

~~It is~~

We saw 1100 birds today. Most were close to Oahu. Near Oahu we saw several feeding flocks of 100 birds, mostly Common Noddies.

We saw 5 whales that I know of.

3 April Saturday

It rained most of the day and the ship rolled terribly. I had that feeling and could not eat dinner.

D. L.  
Stadel  
1965

P 308

## Journal

3 April [Cont.]

I spent \$9.80 of my own money  
for the Shearwater Food Bill  
for the Heewood trip  
\$9.82

4 April Sunday

I planned a black storm  
Petrel and stood watch.

I saw a Juan Fernandez  
Petrel today. I read until my  
eyes gave out.

5 April Monday

I read and finished "One With  
The Wind." It was really great.  
I got a real good look at  
a Juan Fernandez Petrel today.  
We collected a Sooty Tern.

6 April Tuesday

Today was exciting. Pet  
Roald and I were on watch early  
and Dayle Husted was up with  
us. We saw a black with 10  
Juan Fernandez Petrels, 2 Newell's  
Shearwaters and a Pale-footed  
Shearwater, two Sedge-Tailed  
Shearwaters and 5 Sooty Terns.

D.L.  
Stadel  
1965

## Journal

6 April [cont.]

Just before we saw the flock I saw a Phoenix Island Petrel.

We collected 3 Blue-faced Boobies, 2 dark phase Wedge-tailed Shearwaters. The Blue-faced Booby was banded with a green anodized band from Kure.

The Blue-faced Booby from Kure was molting into adult plumage. The head had about 5-10% grey white feathers coming in to replace the brown plumage.

D.L.  
Stadel  
1965

P 310

## Journal

7 April Wednesday

I spent most of the day in the lab cataloging Blue-faced boobies. Doyle Gustafson collected 6 boobies and I collected 4. I took blood samples and parasites and the ship was taking 30° rolls so it took me an hour a bird to catalog them. Three of the Blue-face collected were banded. I got a good look at a Phoenix Island Petrel.

8 April Thursday

We collected nothing, we were on a course of NWW and nothing came near the ship.

I put up a Blue-faced Booby after supper & worked on it at other times of the day. It was rough today.

It was rough and we slept very little.

9 April Friday

We are having engine trouble so are heading back to port.

D.L.  
Stadel  
1965

P312

## Journal

9 April

at Atonolulua or Johnston to get  
more oil. It was very rough all  
day and night.

We saw very few birds  
today.

I did see a Mottled Petrel.

10 April Saturday

a very dull day. I put up a  
blue-faced Booby. Read on "Tails of  
the South Pacific."

11 April Sunday

We collected a Sooty Tern and  
a white-tailed Tropicbird, which  
Ken and I skinned. Dull day otherwise.

12 April Monday

We collected nothing today so  
Dayle Husted thinks it was a terrible  
day plus the fact Dayle says  
he was chased around the boat  
a flying budge for 5 hours by  
P.D.

D. L.  
Stadel  
1965

P 313

## Journal

13 April Tuesday

Gayle Chastel and I collected two birds today, a Sooty Tern and a Sooty Shearwater.

We met the Minkboat from Ich Ion with oil and Karl Essinger was aboard.

The Sooty Shearwater looks about like a big Wedgetail. The feathers are dark brown and the under secondary coverts are white. The bill is black and light brown striped and the lower edge and posterior part of the lower mandible is light grey. The pigmentation on the feet is the same as in the Wedgetail except the colors are brown and light grey.

There were large numbers of Sooty Terns around the ship all day.

We chased several flocks today.

The one largest flock was spread out ~~along~~ over about one mile long and a half mile wide strip.

D.L.  
Stadel  
1965

P 314

Journal

13 April [Cont'd]

The flock was moving all the time it was feeding. We followed it for  $\frac{1}{2}$  hour at 10 knots and it was always just out of gun range. Sooty Terns were over the front of the ship and we could hear shot immature or sub-adult Red-footed Boobies. Pat Gauld wanted to collect the rare birds. The flock was feeding since birds were seen diving to the water. There would be birds spread out & then a group of 50 to 100 would come into a compact flock & feed and then disperse again.

Sooty Tern  $450 \pm 50$  with red tags

Noddy Tern  $10 \pm 3$

Red-footed Booby  $18 \pm 2$

Sooty Shearwater 3

Wedgetailed Shear  $25 \pm 5$  One Red tag

The flock was seen at 1507

The second flock was seen at 1615. and followed for 20 minutes. until they dispersed.

D. h.  
Stadel  
1965

P 315

# Journal

13 April, 1965 [Cont.]

Sooty Terns 150±15

Common Noddy 5±1

Sooty Shearwater 2±7

Wedge-tailed Shear 4±1

Red-footed Booby 15±2

Blue-faced Booby 2±

We were trying to collect a Sooty Shearwater so we did not shoot any Terns when we could have.

at 1814 we spotted the third flock. It was feeding in the same manner of being spread out & then coming into a compact flock when the fish came to the surface of the water. We followed the flock for 40 minutes and collected the Sooty Shearwater from this flock.

The Sooty Shearwater we collected (Husted & myself) was sitting on the water & Husted saw it trying to take off when it was 50 ft off out of the ship, he hit it twice and then I shot it 3 times. All

Dh-  
Stadel  
1965

P 316

## Journal

13 April

shots went into its back and all the time we were turning the ship around the bird was flapping its wings and shot it again when we came within range. The bird had 5 patterns from #4 shot of a 10 gauge shot gun and it was still sitting on the water flapping its wings.

14 April Wednesday

Today we had fun.

Mr. Fisher, Da-Ro Hasted and myself went out in the ten foot boat to put out oil and sit off to see if we could attract any birds to collect. We used Wesson oil and castor oil (5 gallons of Wesson and about one gallon of Castor oil).

After we put out the oil we drift around the oil to see what we could attract. We saw 5 Leach's Storm Petrels and 5 Sooty Terns and and 4 Sooty Shearwaters and 5 Shearwaters and one Pterodroma.

The Sooty Shearwaters seemed to avoid the boat and we only saw one close enough to shoot at and the rough water kept us from shooting more than once.

One Red-tail came close to the craft but did not commit us by coming so we only shot at it once.

The Sooty Terns were all far from the craft. Da-Ro shot at all the Leach's Petrels and hit them but did not kill them. They would be almost in the craft before we would see them. That did

D.L.  
Stadel  
1965

P 317

## Journal

14 April [Cont.]

not see our Tropicos from the ship 57 so apparently the oil affected this species. It spread the oil but it spread of its own accord in two and one half hours so it should just be out over the side of the craft while it was sitting still and the oil didn't spread at all.

The birds were hard to see while you are sitting so low to the water thus they would often be within gun range before we saw them and by the time Doyle took aim they would be out of range. We sit so low in the boat that Doyle almost blows off the bow of the boat when we turned over a wave and he was not wearing enough of his gear. They are going to build a shooting platform so we can stand up in the boat while shooting and observing and we should be able to spot the birds much better.

~~MOST DANGEROUS AREA SHOULD NEVER BE SHOT AGAIN~~  
ONE PERSON IN THE CRAFT WITH A GUN SHOOTING AT BIRDS, THE SIGHTING OF THE CRAFT IN THE RANGE TO TOO DANGEROUS A POSITION MAY GET SHOT.

The boat handles well and I think they will receive their money's worth out of the ship if we ever get into a flock.

There were swells about 6 to 7 feet high and the boat ride over them well and I don't feel that you could hold the gun steady to shoot if the sea was any rougher, and it would be much better if their were calm seas.

I will never forget the glint in Mr. Fishers eyes when he was checking out the boat to see how fast and how well the craft would run.

We collected two Red-footed Boobies and one of which Ken dropped on the flying bridge. Both birds were immatures.

We saw two feeding flocks about sun-down. The first flock was seen at 1740 and consisted of:

Footy Tropic	256	1
Cooks Petrel	2	"
Sooty Shearwater	3	

D.H.  
Stadel  
1965

Journal

14 April [Cont]

The first flock was feeding on flying fish and hovering rapidly from spot to spot to be over the sunbathing fish.

The second flock we spotted at 1810 and it consisted of:

Sooty Terns 1043

Shearwater / Petrel 2

The flock was flying high but occasionally some of the terns would drop down to the water, we did not get close enough to shoot at any birds.

15 April Thursday

T added another bird to my hit and did not kill list. T hit a Noddled petrel with two shots and Dave hit it once but it flew away. In the morning we both hit a Red-tailed Tropicbird and it could not rise more than ten feet of the water but it flew away. T also had a Leached Storm Petrel fly through my pattern and it did not kill it. T am sure all three birds hit but we could not bring them down.

We did not see any flocks today. We saw Noddled Petrels and 20 Sooty Terns. We saw 17 Noddled and 7 Sooty Shearwaters so apparently the Noddled makes the most of migration further west.

T think T saw a Polynesian Shearwater, my boat was to the sun and I did not see any white under the wing when it was turned up.

16 April Friday

What a day! We collected 18 birds and skinned 10 of them. It was 0100 before T finished skinning down the island.

We saw a total of 542 birds and 350 of them were in flocks. There was a total of 15 species seen. We saw a total of 6 flocks but only three were feeding at the time seen.

We saw 105 Sooty Terns and collected 11 and two Red-capped stormers and were banded.

D.L.  
Stadel  
1965

P 319

## Journal

16 April [Cont]

The first flock consisted of 11 Sooty Terns flying southwest together. The second flock was 2 Sooty Terns traveling southwest at 0231. The third flock consisted of 4 Sooty Terns and two Wedge-tailed Shearwater. At 0245 we saw the fourth flock which consisted of 26 Sooty Terns and one Sooty Shearwater. The same feeding took place at 0245 high over the water and one Sooty Tern.

At 0255 the fifth flock was seen feeding and one Sooty Tern was collected which was banded and had an orange streamer. The flock consisted of 26 Sooty Terns and one Wedge-tailed Shearwater.

The sixth flock was seen at 1800 feeding actively so we put the small craft over the side to try to net in the middle of the flock. The flock consisted of: Sooty Terns 225+ 25  
Wedge-tailed Shearwater 4  
Frigate bird 2  
Sooty Shearwater 4  
Red-footed Booby imm. 3+

Davie collected 6 Sooty Terns and one had an orange streamer and was banded on Johnston Island.

The flock was actively feeding. They would be spread out and then come together into a concentrated flock or association to feed when the fish would come to the surface. The flock feeding reminds me of a number of herds running round in a flat container except the birds are drawn together where the fish are.

I could see the Sooty Terns diving into the water from the Shearwater. Davie was in the small craft chasing the flock. He could get close to the Sooty Terns but the Sooty Shearwaters were always just out of gun range.

The small craft worked very well since there was the round hole been in the boat so Davie could stand up while they were moving to fire. From a distance it looked Davie was running on the surface of the water.

P.H.  
Stadel  
1965

P 320

## Journal

### 17 April Saturday

We collected two Red-tailed Tropicbirds and one White-tailed, one Blue-faced Boobies and one Frigatebird. Total 10 birds.

We were running into the wind all day and we only saw 10 birds. It doesn't make sense that on the 16th we would see 540 and now we have 50 miles and in the other way and only see 10. I don't think it can be the wind for some unknown reason.

18 April Sunday. We are the same distance from land as on the 16th birds should be more but we don't see them. We were going north east in the mid today.

One thing interesting about today was we did not see any Sooty Terns but the uncommon birds we saw fit in among the more common ones. We did not see any flocks in fact we only saw 2 Frigatebirds and otherwise all sightings were single birds.

I finally collected a Frigatebird today and it is about the 10 bird that we are sure we hit of this species but we could not find them. I broke its wing so it would still be flying.

I started an Rotavirus catalog for the at sea species and set all the data up for this trip and after I leave they can do with it what they want.

I hit any species I saw but did not even allow it down.

### 18 April Sunday Easter

We had another good day collecting today 16 birds and 13 from the craft. All we saw Sooty Terns except for a Red-tailed Tropicbird and a Frigatebird. Collected from two separate flocks, three and ten birds respectively.

The first flock had about 120 birds and I stated collected three Sooty Terns before the flock broke up, they were feeding but scattered off in all directions when he start shooting. Birds:

Sooty Terns	125+	20
Fairy Tern	1	-
Frigatebird	1	-
Sooty Shearwater	1	-
Blue-faced Booby	1	-

D.L.  
Stadel  
1965

P321

## Journal

18 April Sunday

Before 161 we spotted the first flock we were sure it was there because of the Sooty Terns going by all in one went and we finally spotted the flock in the southwest moving east. Sightings prior to seeing the flock:

0010	Sooty Terns	5	SW
0012	Sooty Terns	2	W
0014	Sooty Terns	2	W
0016	Sooty Terns	2	W
0016 Flock			

This is a common thing when you are near a flock to see Sooty Terns going in the direction toward the flock. By watching Sooty Terns we can tell what direction to keep a sharp look-out for flocks. This flock was feeding.

The second flock was sighted at 1705 but there were no Sooty Terns going by to warn us that there was a flock anywhere near. They were actually feeding in fact we saw a Sooty Terns dive and catch a fish of troches long and rise in mid flight white to ate it. The flock was moving around all over in front of the ship while we sat and watched noted passing them in the craft. I noted and noted a Sooty terns in about an hour. Flock consisted of:

Sooty Terns	100± 10
Sooty Shearwaters	1
Bonin Island Petrel	1

The flock was following fish all over wherever they would come to the surface to feed.

19 April Monday

Today is now the 21st and I have not had time to write notes or think for the last three days because of working on bird skins.

This morning T was the only one up and found was a Common Noddy sitting on a log when the ship came by and T shot it.

The first flock consisted of:

D. L.  
Stadel  
1965

Journal

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19 April [cont.]

Leaches	7
Bonin Island Petrel	?
Sooty Tern	75+
Fairy Tern	1
There was a second inf. commiss under the finne and it was moving rapidly and we could not get into the flock with the 8" net.	
The second flock was different:	
Sooty Tern	45+
Blue-faced Booby	2
Sooty Shearwater	4
Bonin Island P	1
Pale-footed Shearwater	
Shearwater/Petrel	3+
Blue-faced Booby	2
Wedgetail	2

20 April Tuesday

Worked on skins and in the lab all day and did not stand watch.

The flock seen consisted of:

Sooty Tern	275+
Wedgetailed Shearwater	5+
Pale-footed Shearwater	1 collected
Sooty Shearwater	2+
Jamer (small)	1
Leaches's Storm Petrell	1

21 April Wednesday

I am doomed from putting up six birds and skinning 17 birds with Tom "Sawyer". The day was a busiday for flocks since 4 were seen.

The first flock seen at 0840 consisted of:

Sooty Tern	72
Shearwater/Petrels.	3

The second flock was seen at 1035 and at first was ~~1000+~~ thought to be only 35 birds but as we got close to the flock it was observed there

D.L.  
Stadel  
1965

P 323

## Journal

21 April Cont

65 Sooty Terns instead of 35. We collected two Sooty Terns and one Wedgetail. The flock consisted of:

Sooty Tern 65 + 5

Pale-footed Shearwater 7

At 1515 we saw the first feeding flock which

was feeding on a fish school which was breaking  
apart. The large school broke up into 3 or 4 smaller  
components. A Y Shear was observed chasing a

Booby. The Shear was all dark with white in the wings  
it was the size of a Booby. Flock:

Sooty Tern 75 + 10

Leach's Petrel 2

Sooty Shearwater 1

Wedge-tailed Shearwater 5

Skuas 1

Booby 1

Red-tailed Tropicbird 1

The next flock was seen at 1700 and we chased  
it with the ship and collected a Frigate and  
Wedgetail. The flock was breaking up and reforming  
and it was short. Flock:

Sooty Tern 75 + 15

Wedge-tailed Shearwater 25 + 5

Pale-footed Shearwater 3

Sooty Shearwater 5

Frigatebird 2

Romanine Tern 21 adult and Imm

I hit a Romanine Tern today but did not  
kill it.

22 April Thursday

Ken and I put up 17 birds and catalogued and  
were scored when we finished. We saw three flocks  
today and the composition of the flocks has  
changed since we are in a new area.

D.L.  
Stadel  
1965

P328

## Journal

22 April [cont.]

The first flock seen at 0745 consisted of:

Sooty Tern 20 ± 5

Wedgetail 5 or 6

Ternan 1

Common Noddy 1

Sooty Shearwater 2

The second flock consisted of: 0935

Sooty Tern 13 3 collected

Wedgetail 5

Red-tail 1 collected

The third flock consisted of: 1020

Sooty Tern 75 7 one collected

Wedgetail 4

Red-tail/Shearwater 1 Audubon or  
Newells

Red-tail 1

The last flock seen at 1640 consisted of:

Sooty Tern 50 ± 5

Wedgetail 50 ± 10

Pale-footed Shearwater 1

Red-tail 2

Brachy Storm Petrel 1

Great-backed Tern 1

Feisty Tern 1

Common Noddy 10 ± 1

Red-footed Booby 1

23 April

It has been a good trip and much was accomplished. We collected 107 birds and put up 73 of them and have several others skinned. I started a record and an ectoparasite catalog and started putting labels inside whirl tracks with the stomach contents.

D.L.  
Stadel  
1965

April At Sea

P 325  
23 April

Journal

	2nd	3	4	5	6	7	8	9	10	11	12	13
Black-footed Albatross	3	1										
Wedge-tailed Shearwater	563	114	13	11	38	7	5	3	5	78	9	42
Christmas Is.												
Shearwater	8											
Bulwer's Petrel	134	1	4		5	3	5	1		12	3	
Red-tailed Tropicbird												
White-tailed Tropicbird			1						1	2	4	1
Blue-faced Booby					5	18						4
Brown Booby	1											
Red-footed Booby	15											47
Great Frigatebird		1							1	1	3	2
Sooty Tern	43	228	5	19	87	40	17		4	321	318	1472
Common Noddy	133											22
Hawaiian Noddy	5											1
Pomarine Jaeger	13								1			
Sooty Shearwater	51	108	74	44	135	86	159	83	88	250	84	14
Leach's Storm Petrel	3	11	11	17	9	4	5	10	5	7	5	1
Red Phalarope	2	1										
Fairy Terns		3		1	2				2		2	
Grey-backed Tern	1											3
Juan Fernandez Petrel				1	2	34	14	1				
Kermadec Petrel					1	1						
Audubon's Shearwater						17	2					
Cook's Petrel							1					
Mottled Petrel									1			1
White-necked P.		1										
Phoenix Is. Petrel					4	2						
Pale-footed Sh					2							
Sooty Petrel		1				1		1		1		
Terrold's P.									1	1		

D.L.  
Stadel  
1965

# April at Sea

P'326  
23 April

## Journal

D.L.  
Stadel  
1965

April at Sea

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23 April

Journal

Day time

Date	Miles	Hours	# Birds	Birds Per Linemile	Species	Location
02	91	9.1	1118	12.29	14	Oahu + 0 $20^{\circ} 05' N$ $20^{\circ} 05' N$ $\times 156^{\circ} 54' W$ $18^{\circ} 53' N$ $\times 155^{\circ} 04' W$
03	105	12.2	484	4.61	11	$+ 0 17^{\circ} 00' N$ $\times 154^{\circ} 56' W$
04	109	12.2	117	1.07	7	$14^{\circ} 58' N$ $\times 154^{\circ} 25' W$
05	107	12.2	122	1.14	8	$+ 0 13^{\circ} 45' N$ $\times 154^{\circ} 03' W$ $12^{\circ} 39' N$ $\times 151^{\circ} 04' W$ $9^{\circ} 59' N$ $\times 151^{\circ} 10' W$
06	116	12.3	429	3.70	13	$+ 0 11^{\circ} 2' N$ $\times 150^{\circ} 28' W$ $+ 0 8^{\circ} 40' N$ $\times 152^{\circ} 35' W$ $8^{\circ} 00' N$ $\times 153^{\circ} 20' W$
07	65	12.3	239	3.68	10	$+ 0 8^{\circ} 46' N$ $\times 153^{\circ} 28' W$ $9^{\circ} 25' N$ $\times 155^{\circ} 05' W$
08	122	12.4	296	2.38	6	$+ 0 9^{\circ} 34' N$ $\times 157^{\circ} 05' W$ $10^{\circ} 34' N$ $\times 157^{\circ} 2' W$
09	109	12.3	133	1.22	6	$+ 0 10^{\circ} 23' N$ $\times 157^{\circ} 22' W$
10	121	12.4	157	1.30	9	$14^{\circ} 01' N$ $\times 157^{\circ} 19' W$ $+ 0 15^{\circ} 5' N$ $\times 157^{\circ} 53' W$
11	123	12.6	904	7.35	7	$16^{\circ} 00' N$ $\times 160^{\circ} 00' W$ + 0 $16^{\circ} 11' N$ $\times 162^{\circ} 07' W$
12	136	12.6	473	3.48	8	$16^{\circ} 15' N$ $\times 164^{\circ} 10' W$ $+ 0 16^{\circ} 25' N$ $\times 166^{\circ} 50' W$
13	117	12.5	1630	13.93	13	$16^{\circ} 53' N$ $\times 165^{\circ} 52' W$ + 0 $15^{\circ} 50' W$ $+ 0 16^{\circ} 10' W$ Johnston @ 1300

20 122 12.5 385 3.16 9  $17^{\circ} 16' W$   $171^{\circ} 09' W$  + 0  $16^{\circ} 08' W$   $17^{\circ} 052' W$

21 328 12

22

23

Journal

23 April Friday

We arrived in port at 1700 and took 1½ hour to get back to the hotel

24 April Saturday

We went shopping for supplies  
.50 bus fare

25 April Sunday

Slept & worked on nail.

26 April Mon.

We worked at the Shearwater all day.  
I worked on labels and labels for the birds. Ken & Paul worked on putting up skins. Expenses

\$1.75 Bus ~~Fare~~ + ~~etc~~

27 April Tuesday

We worked on the shearwater all day with the bird specimens collected on the April at sea. Expenses

\$1.00 bus tickets

\$35.00 Food Bill on Shearwater

28 April Friday Wednesday

We finished up skinning birds and stuffing.

29

April Saturday Thursday

Shoes \$7.76

Hat \$2.43

Socks 3 63

D.L.  
Stadel  
1965

P 331

Journal

Fred Sibley  
Bob Fleet

Bob Long  
Lanny Huber  
Bob Stander  
on cruise

7 May Friday

OH! I think it was a morning  
and then I ran after work and  
pain. Expenses:

\$1.89 Sun glasses

8 May Saturday

Fred Sibley, Bob Fleet and I  
loaded the Orakari ATF for  
the cruise. I went to bed early.

9 May Sunday

Fred & Bob went to the ship  
to work and I worked in the  
Hotel room on blood vials.

Fred and I went down and  
walked along Waikiki beach to  
get our eyes filled for the next  
two months. We saw all kinds of  
things! Fred and I went to "The Sound  
of Music" with Julie Andrews and  
Robert Plummer.

~~Fred Sibley~~

10 May Monday

Lanny Huber, Bob Fleet and  
Fred Sibley and I left the Hotel  
at 0900 for the ship and a

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Catalog

Field #						
150	0950	<i>Oceanodroma leucorhoa</i>	Ad ♀	Ova 2 mm	Ovary 7 mm	
			- - - - -			$\equiv 41.5$
		Molt on neck, head, back, breast & belly. Primaries and secondaries molt complete. No parasites found.				
		P.G. Du Mont coll.	April 3, 1965			
		Stomach				
151	0951	<i>Sterna fuscata</i>	Ad ♂	Teste 13 x 7 mm		
11°31'N by 150°31'W		length extent 444 - 708 -	April 5,			$\equiv 198$ gm.
Pacific Ocean		Collector D. Husted	Brood pouch bare on both sides.			
		W-L - PR 1-10 fairly new		Stomach		
		PL .. ..				
		RR 1-6 ..				
		RL 1-6 ..				
152	0952	<i>Sula dactylatra</i>	April 6, 1	Ovary 7 mm	♀	
9°30'N by 151°43'W		805 - 1635 -				$\equiv 1475.$
Pacific Ocean		Collector D. Husted.				
		Blood. - Stomach				
153	0953	<i>Puffinus pacificus</i>	April 6	Adult ♂		
9°27'N 2 151°47'W		465-1003-				$\equiv 412.$
Pacific Ocean		Collector D. Husted	Dark Phase	Testis-		
		Stomach.				
		one primary molting on each wing. Under secondary. Covert molting. Molt on head, neck, back & breast.				
154	0954	<i>Puffinus pacificus</i>	April 6	Ad ♂		$\equiv 392.0$
9°27'N 2 151°47'W		450-1015-				
Pacific		Collector D. Husted				
		Primaries and secondaries nearly molted. Molt on head, neck, breast and back.	Stomach			
	..	Right teste 7 x 6 mm	Left teste 10 x 6			
		Right fat	Dark phase			

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# Catalog

155	USNM 0955	Sula dactylatra	April 6	Sub-Adult	♀	12 x 7 mm Ovary 18 x 7 mm
8° 56' N x 152° 17' W		Culmen 7 mm Tarsus 103 mm M. 92 mm Tail 160 mm wing 500 mm				$\equiv 1603$
Collector - D.L. Stadel						
Band # 757-67344						
Molt on head & neck.						
Outer four primaries old, but inner four are new and inner most primary in quill 1 1/2 inch long, secondaries are all new on right wing.						
Right wing is the same as the left as far as molt is concerned.						
There are white feathers coming where the brown is now.						
Location = 8° 56' N x 152° 17' W Pacific Ocean						
Blood - Stomach						
156	USNM 0956	Sula dactylatra	April 6	Sub-Adult		
8° 47' N x 152° 27' W		B16 - 1400-102-57-100-170-430				$\equiv 1885$
Collector D. Husted & D.L. Stadel						Sex Unknown
Molt on neck, head & breast						
Light fat.						
Location 8° 47' N x 152° 27' W Pacific Ocean						
Stomach & Blood						
157	0957	Sula dactylatra	April 7	Adult	♀	
8° 07' N x 153° 37' W		820-1520				$\equiv 2017$
Pacific Ocean		Ovary 18 x 8 mm, last ovum 1 mm light fat				
Collector Doyle Husted						
Bill light yellow. Feet <del>black</del> dull olive green and blue at top of tarsus. Gular pouch dark grey						
Eye yellow						
Blood - Stomach						

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158	USNM 0958	<i>Sula dactylatra</i> April 7	♀ Sub-Adult
5°07'N x 153°37'W	825-1630		≡1760
	Ovary 15x5mm, granular	light fat	
	Collector Dayle Husted		
	Bill cream colored. Base of Bill dark grey or blue. Feet Grey. Eye yellow		
	location = 8° 07' N x 153° 37' W Pacific Ocean		
	Blood Stomach		
159	USNM 0959	<i>Sula dactylatra</i> April 7	Subadult
8°09'N x 153°43'W	810-1420		≡1584
	location = 8° 9' N by 153° 43' W Pacific Ocean		
	Collector Dayle Husted		
	Band # 568-72295		
	Bill cream colored. Base of bill dark grey or blue. Feet olive green. Eye yellow		
	Blood Sample # 4 stomach		
	Sex - Unknown		

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# Catalog

168	USNM 0960	Sula dactylatra	April 7	♀ Sub-Adult
	8°28'N 153°35'W	675-1710		≡1808
Location 8°28'N - 153°35'W Pacific Ocean				
Collector Dayle Husted				
Bill light cream colored. Dark grey or blue at base of bill. Feet olive green				
Eye yellow				
Band # 757-69457				
Blood stomach				
161	USNM 0961	Sula dactylatra	April 7, ♀ Sub-Adult	
	8°28'N 153°35'W	Orange 22x5 mm, granular	0 Fat	
		720-1660		≡1655
Collector: Dayle Husted. Blood, stomach				
Bill light cream colored. Dark grey or blue at base of bill. Feet olive green. Eye yellow.				
Location 8°28'N 153°35'W Pacific Ocean				
162	USNM 0962	Sula dactylatra	April 7	Sub-adult
	8°28'N 153°35'W	Collector - Dayle Husted	Blood stomach	
Bill greenish yellow; gular and eye ring dark purple; iris silver; mouth lining purple; feet + legs brown violet, claws white				
Wt - 1670 gm; L - 790 mm, E 1630 mm				
Band # 757-67382				
Sex - Unknown, Slight fat				
Location 8°28'N by 153°35'W Pacific Ocean				

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USNM 0963 <sup>163</sup>	<i>Sterna fuscata</i> April 11	Adult ♀
445-895	Ovary 11x4 mm; 1st ovum 2 mm;	
1500	Brood patches present; moderate fat	
	Collector Dagle Husted. Blood stomach	
	Bill & feet black. Iris brown	
	Gape flesh colored	
	Ticks taken from ventral body and wings	
	Location = $16^{\circ}07'N$ x $161^{\circ}38'W$ Pacific Ocean	
USNM 0964 <sup>164</sup>	<i>Phaethon lepturus</i> April 11	Adult ♀
665-875	Ovary 10x7 mm, 1st ovum 11 mm	
1510	Location $16^{\circ}08'N$ $161^{\circ}50'W$	
	Collector Dagle Husted Ken Amerman	
	Tarsus & feet Pale blue or grey, Toes black. Eye brown iris	
	Bill light yellow with a black tip on upper mandible. Blood stomach	
	Parasites collected mostly from tail, and wings; none from head or neck.	
USNM 0965 <sup>165</sup>	<i>Sterna fuscata</i> April 13	Adult
1000	450-670	♂ 228
	Location $16^{\circ}37'N$ $169^{\circ}04'W$ Pacific Ocean	
	Collector Stadel & Husted	
	Bill and feet black. Eye brown.	
	Sex unknown	
	Brood pouch bare	Stomach

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166	USNM 0966	<i>Puffinus griseus</i>	April 13	Ad. ♂
1645	485-835			≡ 814
		Left testis 7x4mm, right 6x3 - black	Moderately fat.	
		Collector D.L. Stadel & D. Husted		
		Bill light and dark brown mixed.		
		Bill grey at base & along ventral surface of the lower mandible		
		Iris brown		
		Feet light blue or light grey on inside of tarsus and feet. Outside of tarsus		
		light brown & turning to black at posterior edge of tarsus.		
		Bottom of toes dark brown		
		Brown pigment at joints of phalanges on dorsal surface of toes.		
		Broad pouch was bare during previous breeding season, new down coverage.		
		Molt - on breast	Blood, Stomach	
167	Location = 15° 50' N	169° 16' W	Pacific Ocean	
167	USNM 0967	<i>Sula Sula</i>	April 14	Sub-Adult
	760-1630			≡ 1246
1300	Location = 13° 30' N	169° 38' W	Pacific Ocean	
	Collector Dayle Husted		Stomach	
	Feet cream colored. Eye cream			
	Bill dark brown. Around eyes & gular pouch is light blue and grey			

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168	45NM 0968	<i>Sula sula</i>	April 14	Imm.
	1097 gm.	L-733, WIS-1558	Coll D. Husted	
		Bill pale pink, dark brown tip; eye skin bright (stomach) blue; gular pale lilac; iris light tan; feet dull rose, legs gray, nails white. Back, wings, tail brown, underside white, slight breast band, head + neck feathers brown with white tips.		
		Location = $13^{\circ} 14'N$ $169^{\circ} 58'W$ Pacific Ocean		
169	15NM 0969	<i>Sula dactylatra</i>	April 16	♀ Ad
	800-1650			$\equiv 1943$
		Location = $15^{\circ} 24'N$ $169^{\circ} 54'W$ Pacific Ocean		
		Collector Stadel & D Husted Blood - Stomach Coll.		
		Bill very light yellow. Ovary - 15 x 6		
		Blue around eyes, gular pouch. ova-granular		
		Feet light olive green		
		Eye white		
		No molt on neck, head. No parasites		
170	15NM 0970	<i>Sterna fuscata</i>	April 16	Adult ♀
	425-880			$\equiv 214$
		Location $15^{\circ} 30'N$ $170^{\circ} 08'W$ Pacific Ocean		
		Collector Ken Amerman		
		Bill & feet black	Stomach saved.	
		Eye brown		
		Broad Pouch bane ♀ Ovary 9 x 4		

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USNM 0971 <sup>171</sup>	<i>Sterna fuscata</i> 485-915	April 11	Adult ♂ = 219.5
<p>L. testis 11x6 mm, right 6x5 mm, moderate fat Collected by Husted &amp; Amerman Bill is feet black Eye dark brown</p>			
<p>Location = <math>15^{\circ} 27' N</math> <math>170^{\circ} 12' W</math> Pacific Ocean</p>			
<p>Blood - Stomach</p>			
USNM 0972 <sup>172</sup>	<i>Sterna fuscata</i> 465-885	April 16	Adult ♀ ovary 8x5.5 mm; OV = 2x2 mm = 163.0
<p>Location = <math>15^{\circ} 24' N</math> <math>170^{\circ} 16' W</math> Pacific Ocean</p>			
<p>Collected by Husted Bill is feet black Eye dark brown</p>			
<p>Abdominal and under tail coverts with grey to light grey feathers.</p>			
<p>Blood - Stomach</p>			
USNM 0973 <sup>173</sup> 1042	<i>Sterna fuscata</i> 465-890	April 16	Adult ♂ = 237
<p>Left testis 12x8 mm, right 8x7 mm Heavy fat Collector D Husted Bill &amp; feet black</p>			
<p>Eye brown</p>			
<p>Brood Patch bare</p>			
<p>Location = <math>15^{\circ} 22' N</math> <math>170^{\circ} 19' W</math> Pacific Ocean</p>			
<p>Blood - Stomach</p>			

USNM 0974	<sup>179</sup> 12.5	<i>Sturna fuscata</i> 445 - 885	April 16	Adult ♂ <del>testes 11x5; 7½x5½</del> = 199.5
		Ovary 12x4 mm; 1st ovum 1 mm heavy fat		
		Collector Doug Husted		
		Bill & feet black	$15^{\circ} 10' N$	$170^{\circ} 28' W$
		Eye dark brown	Location = Pacific Ocean	
		Broad patch bare		
		Blood stomach		
USNM 0975	<sup>175</sup> 12.5	<i>Sturna fuscata</i> 445 - 850	April 16	Adult ♂ $\equiv 218.5$
		Location $15^{\circ} 10' N$ $170^{\circ} 28' W$ Pacific Ocean		
		Collector Husted & Stadel 1		
		Bill & feet black		
		Eye dark brown	Testes	$11x5, 7\frac{1}{2}x5\frac{1}{2}$
		Broad patch partially refeathering		
		Blood stomach		
USNM 0976	<sup>176</sup> 12.5	<i>Sula sula</i> April 16	Sub-Adult	♀ $\equiv 1300$
		780 - 1455		
		Location = $15^{\circ} 06' N$ $170^{\circ} 31' W$ Pacific		
		Collector P. Gould & D.L. Stadel		
		Red feet.		
		Blood stomach ecto parasites		
		Ovary - 18x9		
		Ova - 71 mm		

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177	USNM 0977	Sterna fuscata	April 16	Ad. ♀	
14.05	445-845				≡ 204.5
		Ovary 12 x 7 mm, 2 <sup>nd</sup> ovum 4 mm			
		Collector Dayle Husted	stomach		
		Bill & feet black, eye brown			
		Band # 753-79962 Orange			
		Brood pouch bare; no parasites			
		Location = $14^{\circ} 59' N$ $170^{\circ} 37' W$ Pacific Ocean			
178	USNM 0978	Puffinus pacificus	April 16	♂ Teste 5x3 5x3 Ad.	
14.39	455-840				≡ 342
		Location = $14^{\circ} 59' N$ $170^{\circ} 37' W$ Pacific Ocean			
		Collector D Husted	stomach	♂	
		Eye dark brown			
		Feet pink with brown pigment			
		Bill mottled grey & pink with a grey tip			
		Molt on back, neck, scapulars, throat			
179	USNM 0979	Sterna fuscata	April 16	Ad. ♂ Left 12 x 7 Teste Right 7 x 5	
14.1	450-883				≡ 241
		Location = $14^{\circ} 55' N$ $170^{\circ} 48' W$ Pacific			
		Collector D Husted & Ken Anerman	♂		
		Feet & bill black, eye brown			
		Stomach			

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180	USNM 0980	Phaethon lepturus	April 16, Sub-Adult	
15	560-825			≈ 287.5
	Location = $14^{\circ}47'N$ $170^{\circ}50'W$ Pacific Ocean			
	Collector Ken Amerman			
	Bill light yellow, black behind lores			
	Legs light pink & blue			
	Feet black, Eye dark brown			
	Blood- stomach			
181	USNM 0980	Sterna fuscata	April 16	Adult ♂
	305-871			≈ 212.0
	Location = $14^{\circ}36'N$ $171^{\circ}03'W$ Pacific Ocean			
	Collected by Dayle Husted Ov. 10x7.5; In ov. ~4x4 mm			
	Bill and feet black.			
	Eye dark brown			
	Brood patch base			
	Stomach			
182	USNM 0982	Sterna fuscata	April 16	Adult ♂
	450-865			≈ 255.0
	Location = $14^{\circ}36'N$ $171^{\circ}03'W$ Pacific Ocean			
	Collected by Dayle Husted			
	Bill and feet dark brown			
	Eye dark brown			
	Very large brood <del>patch</del> patch			
	Testis 6x2.5; 5x2 mm			

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MSNM 0983	<sup>183</sup> Sternula fuscata	April 16	Adult ♀
	460-900		± 229.0
Location = $14^{\circ} 36' N$ $171^{\circ} 03' W$ Pacific Ocean			
Collected by Dayle Husted			
Feet and bill black			
Eye dark brown			
No brood patch Moderate fat			
	Ovary 10.5 x 10	Ova 2.5	
MSNM 0984	<sup>184</sup> Sternula fuscata	April 16	Adult ♀
	463-865		± 230.5
Location = $14^{\circ} 36' N$ $171^{\circ} 03' W$ Pacific Ocean			
Collected by Dayle Husted			
Feet and bill dark black. Eye dark brown			
Ovary 14 x 5 Ova 2mm			
Brood patch bare Moderate fat			
Fls Band # 753-76170 - Orange streamer			
MSNM 0985	<sup>185</sup> Sternula fuscata	April 16	Adult ♂
	460-880	LT 8 x 5.5, RT 5 x 3.5	± 195.0
Location = $14^{\circ} 36' N$ $171^{\circ} 03' W$ Pacific Ocean			
Collected by Dayle Husted			
Brood Pouch bare			
Feet and bill black. Eye dark brown			
Moderate fat			

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MSNM 0986	186	<i>Sterna fuscata</i>	April 16	Adult ♀
	425-860			= 170.0
	Location = $14^{\circ} 36' N$ $171^{\circ} 03' W$ Pacific			
	Collected by Dayle Husted			
	No Parasites. Broad pouch bare			
	Feet and bill black. Eye dark brown			
	Ovary - $13 \times 7$ mm; 1 ov. - $2 \times 2$			
	Blood stomach			
MSNM 0987	187	<i>Phaethon lepturus</i>	April 17	Sub-Adult ♂
	620-840			= 318
	Location $13^{\circ} 40' N$ $172^{\circ} 49' W$ Pacific Ocean			
	Collector Dayle Husted	testes = $6 \times 3.7 \times 2.5$		
	Bill - yellow green w/ gray at extreme base and gray/black about <sup>and tip</sup> nares			
	Legs blue-grey; distal $\frac{2}{3}$ thirds of digits blue-black; Eye black.			
	385 Total length without long tail feather.			
	Blood - stomach			
MSNM 0988	188	<i>Phaethon rubricauda</i>	April 17	Sub-Adult ♀
	580-1120			= 809
	Location = $13^{\circ} 40' N$ $172^{\circ} 49' W$ Pacific Ocean			
	Collector Dayl Husted	testes <del>8.3</del> ; <del>6.5</del> ; <del>8.3</del>		
	Very small ovary - $12 \times 7.5$ mm			
	largest ovum - granular			
	Blood -			
	<del>580</del> 505 Total length with out long tail			

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USNM 0989<sup>189</sup> *Sula dactylatra* April 17 Sub-Adult ♂  
847-1549  $\approx 1910.0$

Location =  $14^{\circ} 14' N$   $172^{\circ} 43' W$  Pacific Ocean

Collected by Dayle Husted

Bill grey on face, grey-green on rostrum; feet grey

~~Feet black~~; no broad patch Eye very light yellow

Blood Teste - 9 x 2 mm

USNM 0990<sup>190</sup> *Phaethon lepturus* April 17 Sub-Adult ♂  
725-1150  $\approx 838$

Location =  $14^{\circ} 26' N$   $172^{\circ} 32' W$  Pacific Ocean

Collector Dayle Husted Testis = 8 x 3; 6.5 x 3 mm.

490 Total length without long tail feather

Molt on head, neck, body & flight feathers.

Bill Orange. Legs pinkish blue

Feet black Iris dark brown

USNM 0991<sup>191</sup> *Oceanodroma leucorhoa* April 17 Adult  
210-475  $\approx 45.4$

Location =  $14^{\circ} 32' N$   $172^{\circ} 24' W$  Pacific Ocean

Collector D.L. Stadel

Bill & feet black

Eye dark brown. No parasites.

♀ ovary = 5 x 6 mm, largest ovule = 1 mm.

Small amount. Fat, heavy molt.

Blood

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## Catalog

192	USNM 0992	<i>Sula dactylatra</i>	April 18	Adult.	♂	
		845 - 1485				$\equiv 1848$
		Collector. D. Husted	Blood	Teste - L + - 12 x 2 R + - 9 x 2		
		Bill pale yellow; gular and eye skin dark purple; iris bright yellow; mouth lining purple; legs + toes greenish-gray, webs purple-brown.				
		No broad patch.				
		Location = <del>16° 36' N 171° 26' W</del>	<del>16° 36' N 171° 26' W</del>	Pacific Ocean		
193	USNM 0993	<i>Sterna fuscata</i>	April 18	♂	Adult	
		440 - 840				184.5
		Location = $16^{\circ} 36' N$ $171^{\circ} 26' W$	Pacific Ocean			
		Collector Dayle Husted				
		Feet & bill black. Eye dark brown				
		teste L - 12 x 6 R 8 x 6.5				
		Moderates fat				
		Blood				
194	USNM 0994	<i>Sterna fuscata</i>	April 18	♀	Adult	
		<del>430 850</del> <del>450 - 850</del>				$\equiv 197$
		Location = $16^{\circ} 36' N$ $171^{\circ} 26' W$	Pacific Ocean			
		Collector Dayle Husted				
		Feet & bill black Eye dark brown				
		Ovary 9 x 6 mm largest ova 1 mm				
		No parasites				
		Light fat				

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# Catalog

195	USNM 0995	<i>Sterna fuscata</i>	April 18	Adult ♀
105	430	456 - 850		≡ 220 gm
Location = $16^{\circ} 36' N$ $171^{\circ} 26' W$ Pacific Ocean				
Collector D. Husted				
Feet and bill <del>black</del> <sup>black</sup> Eye dark brown				
Ovary - $8.5 \times 6$ mm; Lrg. Ov - $1.5 \times 1.5$ mm				
Blood				
196	USNM 0996	<i>Sula dactylatra</i>	April 18	Sub-Adult
105	860 - 1700			≡ 209 gm
Location = $16^{\circ} 31' N$ $171^{\circ} 29' W$ Pacific Ocean				
Collector D. Husted				
Bill very light yellow. Eyes Yellow				
Dark blue around face & eyes.				
Feet blue-grey				
Blood				
197	USNM 0997	<i>Oceanodroma leucorhoa</i>	April 18	Adult ♀
204	476			≡ 35.5 gm
Location = $15^{\circ} 58' N$ $172^{\circ} 04' W$ Pacific Ocean				
Collector P.G.D. Mont				
Bill, feet, + legs black				
ovary $3 \times 3$				

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USNM 0998 <sup>1998</sup>	<i>Sterna fuscata</i> April 18	Ad. ♀
440-865		≡ 217
Location = $15^{\circ} 44' N$ $172^{\circ} 20' W$ Pacific Ocean		
Collector Dayle Husted		
Broad patch bare		
Feet & bill black. Eye dark brown		
Ovary 11 x 10 mm      ova 2 mm		
Moderate fat		
USNM 0999 <sup>1999</sup>	<i>Sterna fuscata</i> April 18 ♂ Adult	
415-860		≡ 218.5
Location = $15^{\circ} 44' N$ $172^{\circ} 20' W$ Pacific Ocean		
Collector Dayle Husted		
Broad patch bare		
Bill and feet black. Eye dark brown		
Testes = L = 6 x 3      R = 4 x 2		
Medium fat		
USNM 1000 <sup>2000</sup>	<i>Sterna fuscata</i> April 18	Ad. ♂
465-870-		250
Left Testis 9 x 7 mm, right 7 x 7 mm, heavy fat		
Location = $15^{\circ} 44' N$ $172^{\circ} 20' W$ Pacific Ocean		
Broad patch covered		
Bill and feet black, Eye dark brown		
Collector - Dayle Husted		

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# Catalog

195	USNM 0995	<i>Sterna fuscata</i>	April 18	Adult ♀
		430 <del>450</del> - 850		≡ 220 gm
Location = $16^{\circ} 36' N$ $171^{\circ} 26' W$ Pacific Ocean				
Collector D. Husted				
Feet and bill black. Eyes dark brown.				
Ovary - $8.5 \times 6$ mm; Lrg. Ov - $1.5 \times 1.5$ mm				
Blood				
196	USNM 0996	<i>Sula dactylatra</i>	April 18	Sub-Adult
		860 - 1700		≡ 2090 gm
Location = $16^{\circ} 31' N$ $171^{\circ} 29' W$ Pacific Ocean				
Collector D. Husted				
Bill very light yellow. Eyes Yellow				
Dark blue around face & eyes.				
Feet blue-grey				
Blood				
197	USNM 0997	<i>Oceanodroma leucorhoa</i>	April 18	Adult ♀
		204 - 476		≡ 35.5 gm
Location = $15^{\circ} 58' N$ $172^{\circ} 04' W$ Pacific Ocean				
Collector P.G.D. Mont				
Bill, feet, & legs black. Ovary $3 \times 3$				

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MSNM 1001 <sup>201</sup> *Sterna fuscata* April 18 Adult ♀  
440-810  $\equiv 222$

Ovary 10x7 mm. 19st ova  $\leq$  1 mm. light fat  
Collector Dayle Husted.

Brood patch bare

Bill and feet black. Eyes dark brown  
Location =  $15^{\circ} 44' N$   $172^{\circ} 20' W$  Pacific Ocean

MSNM 1002 <sup>202</sup> *Sterna fuscata* April 18 ♀ Adult  
465-870  $\equiv 206$

Location =  $15^{\circ} 44' N$   $172^{\circ} 20' W$  Pacific Ocean

Collector Dayle Husted

Brood patch ~~covered~~ bare

Bill and feet black. Eyes dark brown

Ovary 9x12 Ova 2x2

Very heavy fat

MSNM 1003 <sup>203</sup> *Sterna fuscata* April 18 Ad. ♂  
455-870  $\equiv 275$

Left testis 16x10 mm, right 10x7 mm. Heavy fat

Collector Dayle Husted

Brood Patch partially bare

Bill and feet black. Eyes dark brown

Location =  $15^{\circ} 44' N$   $172^{\circ} 20' W$  Pacific Ocean

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204  
 1004 *Sterna fuscata* April 18 Ad. ♀  
 430-860  $\equiv 208$   
 Ovary 9x6mm last ovum 1mm light fat  
 Collector Dayle Husted  
 Band # 753-92732 orange streamer  
 Broad patch bare  
 Bill and feet black. Eyes dark brown  
 Location =  $15^{\circ}44'N$   $172^{\circ}20'W$  Pacific Ocean

205  
 1005 *Sterna fuscata* April 18 Adult ♀  
 445-870  $\equiv 208$   
 Ovary 10x6, last ovum 3mm; heavy fat  
 Collector Dayle Husted  
 Bill & feet black. Eyes dark brown  
 Broad patch partially covered  
 Location =  $15^{\circ}44'N$   $172^{\circ}20'W$  Pacific Ocean

206  
 1006 *Sterna fuscata* April 18  
 440-850  $\equiv 210$   
 Location =  $15^{\circ}44'N$   $172^{\circ}20'W$  Pacific Ocean  
 Collector Dayle Husted  
 Broad patch bare Moderate fat  
 Bill and feet black, Eyes dark brown  
 Ovary 11x6.5mm Ova 1mm

D.L.  
Stadel  
1965

P35,

Cata log

1007

<sup>207</sup>  
*Pterodroma hasitata* April 18

325-750

$\equiv 171.5$

Location =  $18^{\circ} 44' N$   $172^{\circ} 20' W$  Pacific Ocean

Collector Dayle Husted

Bill black. Legs blueish-pink. Feet black

Eye dark brown

USNM 1008

<sup>208</sup>  
*Anous stolidus* April 19 Adult ♂.

440-845

$\equiv 216$

Location =  $14^{\circ} 49' N$   $173^{\circ} 58' W$

Collector D.L. Stadel Testis small (4x2 mm ±)  
Heavy molt; medium fat

Molt on head, neck, breast, back kept.  
and secondaries & primaries. No stomach sample

Bill black. Feet dark brown

Blood

USNM 1009

<sup>209</sup>  
*Sterna fuscata* April 19 Adult ♂

438-892

$\equiv 195.0$  gm.

Left testis 6x3.5 mm, right 5x3 moderate fat

Collector Dayle Husted

Bill black. Feet, legs black. Eye dark brown

Blood patch present

Location =  $15^{\circ} 38' N$   $173^{\circ} 39' W$

Blood - Stomach -

skin labelled  
1000  
is skinned  
out  
No stomach  
sample for  
1000

D.L.  
Stadel  
1965

Catalog

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210

1010 *Sterna fuscata* April 20 Adult ♂

450-890

≡ 180.5

Location =  $17^{\circ}16'N$   $171^{\circ}10'W$

Collector D.L. Stadel

Feet & bill black. Eye dark brown

Brood patch bare Very light fat.

Tarsus - L 6x2 R 10x3 ~~light fat~~

211  
USNM 1011

*Puffinus* (?) April 20 Adult ♂

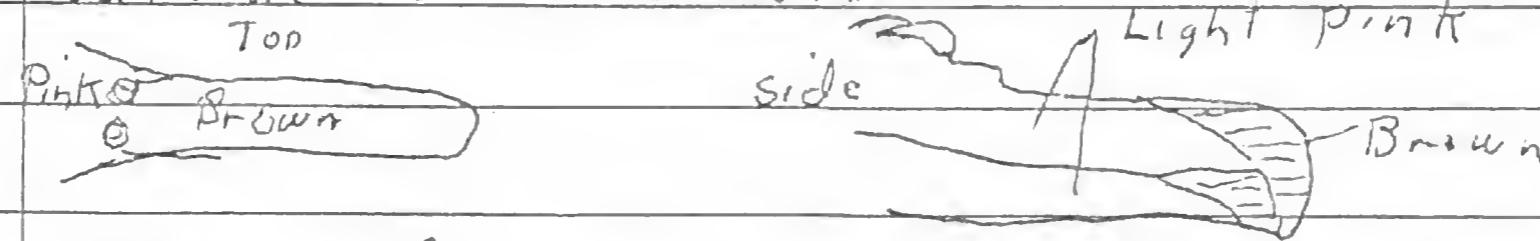
450-920

≡ 612

Location =  $17^{\circ}28'N$   $170^{\circ}31'W$  Blood

Collector Payle Husted LT 6x3, RT 5x2

Feet light pink with brown pigment on  
outside & bottom of toes.



212  
USNM 1012

*Sterna fuscata* Adult ♀ April 20

440-840 Ovary 12.8 mm, Igstova 1.5 ≡ 172.5

Location  $17^{\circ}28'N$   $170^{\circ}31'W$

Collector Payle Husted

Brood patch bare light fat

Bill & feet black. Eye dark brown

Blood

D.L.  
Stadel  
1965

P37

Catalog.

213  
USNM 1018 *Sterna fuscata* April 20, ♂ Adult ♂

470-875

≡200

Location =  $17^{\circ} 28' N$   $170^{\circ} 31' W$

Collector Dayle Husted

Brood patch bare LT 5.5x2.5, RT 4x2.5

Bill and feet black. Eye dark brown  
light fat

Blood

214  
USNM 1019 *Sterna fuscata* April 20 Adult ♀

420-870

≡175

Location  $17^{\circ} 28' N$   $170^{\circ} 31' W$

Collector Dayle Husted

Brood patch bare

Bill and feet black. Eye dark brown.

Ovary 9x9 Ova 2.5x2.5

light fat

215  
USNM 10105 *Sterna fuscata* April 20 Adult ♂

430-890

≡235.5

Location =  $17^{\circ} 28' N$   $170^{\circ} 31' W$

Collector Dayle Husted

Brood patch bare

Bill and feet black. Eye dark brown

light fat

Teste = Left 8x3.5 Right 6x3

D.L.  
Stadel  
1965

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## Catalog

USNM 1016	<sup>216</sup> Sternula fuscata	April 20	Adult ♀
	415-840		= 215
	Location = $17^{\circ}28'N$ $170^{\circ}31'W$		
	Collector Dayle Husted		
	Brood Patch bare		
	Bill and legs black. Eye dark brown		
	Ovary 10X12	ova 2X2	
USNM 1017	<sup>217</sup> Sternula fuscata	April 20	Adult ♂
	450-820		= 204
	Location = $17^{\circ}28'N$ $170^{\circ}31'W$		
	Collector Dayle Husted		
	Brood patch covered		
	Bill and legs black. Eyes dark brown		
	Testis slightly enlarged, but shot up and not measurable		
	small amt. fat		
USNM 1018	<sup>218</sup> Sternula fuscata	April 20	Adult ♂
	420-885		= 244
	Location = $17^{\circ}28'N$ $170^{\circ}31'W$		
	<del>Collector</del> Dayle Husted		
	Brood patch bare		
	Bill and legs black. Eyes dark brown		
	Teste = L 5.5X3 R 4X2.5		
	Light fat		

D.b.  
Stadel  
1965

Catalog

183

MSNM 1019<sup>219</sup> *Sterna fuscata* April 20 Adult ♀

435-840

≡ 207

Location =  $17^{\circ}28'N$   $170^{\circ}31'W$

Collector Dayle Husted

Brood patch bare, ovary 9x6mm, 1st ovary down

Bill and legs black. Eyes dark brown

Light fat

MSNM 1020<sup>220</sup> *Sterna fuscata* April 20 Adult ♂

440-850

≡ 224

Location =  $17^{\circ}28'N$   $170^{\circ}31'W$

Collector Dayle Husted

Brood patch bare

Bill and legs black. Eyes dark brown

Testes = R 6x2.5 L 4.5x2

Medium Fat

MSNM 1021<sup>221</sup> *Sterna fuscata* April 20 Adult ♀

435-850 ovary 10x10mm, ova <1mm

≡ 191

Location =  $17^{\circ}28'N$   $170^{\circ}31'W$

Collector Dayle Husted

Brood patch bare Light fat

Bill and legs black. Eyes dark brown

D.L.  
Stadel  
1965

Catalog

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222	USNM 1022	<i>Sterna fuscata</i>	April 20	Adult ♀	
		415-860			≡ 218
		Location = <del>153</del> $17^{\circ} 28'N$	$170^{\circ} 31'W$		
		Collector Dayle Husted			
		Brood patch bare			
		Bill and legs black. Eyes dark brown.			
		Ovary 6x9	ova	$\geq 1\text{mm}$	
		Light fat			
223	USNM 1023	<i>Sterna fuscata</i>	April 20	Adult ♀	
		455-900			≡ 211
		Location = $17^{\circ} 28'N$	$170^{\circ} 31'W$		
		Collector Dayle Husted			
		Brood patch bare			
		Bill and legs black. Eyes dark brown			
		Ovary 13x7	ova	$4 \times 4$	
224	USNM 1024	<i>Sterna fuscata</i>	April 20	Adult ♀	
		420-870			≡ 181
		Location = $17^{\circ} 28'N$	$170^{\circ} 31'W$		
		Collector Dayle Husted	light fat		
		Brood patch bare	Ovary <del>12</del> $\times 7\text{mm}$ , last oval		
		Bill and legs black. Eyes dark brown			

D.L.  
Stadel  
1965

Catalog

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225  
USNM 1025 *Sterna fuscata* April 20 Adult ♀

440-845

≡ 203

Location =  $17^{\circ} 28' N$   $170^{\circ} 31' W$

Collector Dayle Husted

Broad Patch bare

Bill and legs black. Eyes dark brown.

Ovary 7x8      ovary 1.5x1.5

226  
USNM 1026 *Puffinus pacificus* April 20 Adult ♂

460-900

≡ 348.5

Location =  $17^{\circ} 40' N$   $169^{\circ} 57' W$

Collector - Dennis L. Stadel

Teste  
Left 12x10  
Right 10x10

Broad patch covered

Feet pink with brown pigment on outside  
of tarsus & at the phalange joints.

Bands. 615-01851 & 565-12113

Red paint on head (Johnston Is. Bird)

Orange Streamer      Blood - Stomach

227  
USNM 1027 *Puffinus pacificus* April 205-Adult

455-890

-362

Location =  $17^{\circ} 40' N$   $169^{\circ} 57' W$

Collector Dayle Husted

Broad patch covered

Feet pink with brown pigment on outside  
of tarsus and at the phalange joints

Sub-Adult bird, because feathers are almost  
black & breast feathers have grey on them

Blood      Stomach

P42

usNM 1028	<sup>228</sup> <i>Sterna fuscata</i>	April 20	Adult ♀
	484 - 866		$\equiv 197.0$ gm.
Location = $17^{\circ}42'N$ $169^{\circ}47'W$			
Collector D.L. Stadel			
	Bill, legs + feet black	Ovary 14X7	
	Eye dark brown	Ova 3X3	
	Brood patch bare		
	FWS # 753-98028 ; Orange streamer (Johnston Is.)		
usNM 1029	<sup>229</sup> <i>Sula dactylatra</i>	April 21	Sub-Adult ♀
	900-2215		$\equiv 2299$
Location $18^{\circ}38'N$ $166^{\circ}51'W$			
Collector Pat Gould			
	Bill light yellow	Eye yellow	
	Feet brownish purple		
	Ovary 15X5		
	Ova - minute		
usNM 1030	<sup>230</sup> <i>Sterna fuscata</i>	April 21	Adult ♀
	435 - 885		$\equiv 262$
Location $18^{\circ}48'N$ $166^{\circ}19'W$			
Collector Dayle Blasted			
	Brood patch bare		
	Feet & bill black. Eyes dark brown		
	Ovary 13X7	Ova 2X1	

D.L.  
Stadel  
1965

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Catalog

231  
USNM 1031 *Sterna fuscata* April 21 Adult ♂

310-885 L.T. 11x5, R.T. 5x4 mm  $\equiv 197$   
Location  $18^{\circ} 48' N$   
 $166^{\circ} 19' W$

Collector = Hasted

Brood patch covered light fat  
Feet & bill black. Eyes dark brown

232  
USNM 1032 *Puffinus pacificus* April 21, Adult ♀

455-990  $\equiv 401$

Location ~~Boat~~  $18^{\circ} 48' N$   
 $166^{\circ} 19' W$

Collector = Hasted

Bill grey. Feet pink with brown  
pigment

Ovary 14x8 mm <sup>large</sup>  $\frac{1}{2}$  ovum 2.5x2 mm

1033 *Sterna fuscata* April 21 Adult ♂

455-895  $\equiv 201$

Location  $19^{\circ} 02' N$   
 $165^{\circ} 36' W$

Collector Dagle Hasted

Brood Patch bare

Bill & feet black. Eye dark brown

Teste Left 6x3 Right 6x3

D.L.  
Stadel  
1965

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Catalog

234 1034	Puffinus pacificus	Adult ♀	April 21	
	440-980			371
	Location	19° 06' N 165° 23' W		
	Collector	D.L. Stadel		
	Ovary	13 X 7	ova 2	
235 1035	Fregata minor	April 21,	Adult ♂	
	925-1975			3180
	Location	19° 06' N 165° 23' W		
	Collector	= Dayle Husted		
	Blood			
	Bill	Gular pouch bright red.		
1036	Puffinus pacificus	April 22	Adult ♂	
	460-100			3369
	Location	19° 06' N 163° 13' W	Teste-1689 Lt - 98% RT	
	Collector	Dayle Husted		
	Bill	grey. Feet pink with brown pigment on the outside of the tarsus just the joint.		
	Blood			

D.L.  
Stadel  
1965

P45

# Catalog

1037	<i>Sula dactylatra</i>	April 22, sub-Adult ♀	
	850 - 1615		≡ 1895
	Location	19° 44' N 163° 13' W	Ovary 2.3 x 6 Ova 1 mm
	Collector	Supt Ken Amerman	
		Bill light yellow or cream colored.	
		Feet brownish purple. Eye Yellow	
		Dark blue around face	
1038	<i>Sterna fuscata</i>	April 22	Adult ♂
	450 - 780		≡
	Location	19° 48' N 163° 02' W	
	Collector	D.L. Stadel	L Testis 6.5 x 2 R " 5.5 x 1.5
		Bill, legs, feet black	
		Eye dark brown	
		Broad patch bare	
		Light face.	
1038	<i>Bulweria bulwerii</i>	April 22	Adult
	—		≡
	Location		
	Collector		
		Bill black, eye dark brown	
		Legs grey tinge on pink; feet pinkish, brown-gray	
		pigment (mostly on toes + underside of foot)	
		Heavy molt	
		No forehead patch	

D.L.  
Stadel  
1965

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# Catalog

1039 *Bulweria bulwerii* April 22. Adult ♂

280-680

19° 52' N

≡104

Location 162° 49' W

Collector Dayle Husted

Broad patch covered.

Bill black. Feet & legs pink with  
brown pigment. Eye dark brown.

1040 *Bulweria bulwerii* April 22. Adult

280-670

19° 52' N

≡83

Location 162° 47' W

Collector = Dayle Husted

No broad patch

1041 *Sterna fuscata*, April 22. Adult ♂

455-905

19° 52' N

≡192

Location 162° 47' W

Collector- Husted

Broad patch present LT 7x3 RT 5x2

Bill, legs, feet black, iris dark brown

Light fat

D.L.  
Stadel  
1965

Catalog

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1042	<i>Sterna fuscata</i>	April 22	Adult ♂	
	440-870			≡ 166
	Location	19° 52' N 162° 47' W	Collector - Husted	
		Bill, legs, feet black; iris dark brown		
		Broad patches present	LT 4x3 RT 3.5x2.5	
		Light fat		
1043	<i>Sterna fuscata</i>	April 22	Adult ♂	
	440-890			≡ 170
	Location	19° 52' N 162° 47' W	Collector - Husted	
		Bill, legs, feet black; iris dark brown		
		Broad patches present		
		Teste - LT 6.5x3 RT. 4.5x2		
		Light fat		
1044	<i>Sterna fuscata</i>	April 22	Adult ♂	
	470-900			≡ 168
	Location	19° 55' N 162° 40' W	Collector - Husted	
		Bill, legs & feet black, iris dark brown		
		Broad patches present		
		L Testis 7.0x5.5, R Testis 5.5x4; no fat		

D.L.  
Stadel  
1965

1048

Catalog

1045	<i>Bulweria bulwerii</i>	April 22	Adult ♂
	282-641		$\approx 81.0$ gm
Location	$20^{\circ} 00' N$ $162^{\circ} 19' W$		
Collected by	Gould	light fat.	
Bill	black;	eye dark brown	
Legs	grey-pink;	lower part of phalanges black, upper part pink. No broad patch	
Teste	Lt 3.5 mm grey	RT 5 mm white	
1046	<i>Bulweria bulwerii</i>	April 22	Adult ♂
	274-642		$\approx 83.0$ gm
Location	$20^{\circ} 02' N$ $162^{\circ} 09' W$		
Collected by	Husted	light fat.	
Bill	black, eye dark brown		
<del>Bill black;</del>	<del>e</del>		
Legs	grey pink, lower part of feet dark brown black, upper part of toe pink		
	No broad patch		
Teste	Lt 6 mm	RT 7 mm	
1047	<i>Bulweria bulwerii</i>	April 22	Adult
	275-634		$\approx 77.5$ gm.
Location	$20^{\circ} 03' N$ $162^{\circ} 05' W$		
Collected by	Husted		
Bill	black, eye dark brown		
Legs	pink; upper part of feet dull pink + brown; lower part of feet shiny black.		
	No broad patch		

